

1 IN THE CIRCUIT COURT OF THE STATE OF OREGON
2 FOR THE COUNTY OF MULTNOMAH

3 The Estate of JESSE D.)
 WILLIAMS, deceased, by and)
4 through MAYOLA WILLIAMS,)
 personal representative,)
5)
 Plaintiff,)
6)
 vs.) No. 9705-03957
7)
 PHILIP MORRIS INCORPORATED,) Afternoon Session
8)
 Defendant.) Volume 10-B

9
10 TRANSCRIPT OF PROCEEDINGS

11 BE IT REMEMBERED that the above-entitled
12 matter came on regularly for jury trial before the
13 Honorable Anna J. Brown, Judge of the Circuit Court
14 of the County of Multnomah, State of Oregon, on
15 Friday, March 5, 1999.

16
17 APPEARANCES
18 Raymond Thomas and William Gaylord,
 Attorneys at Law,
19 Appearing on behalf of the Plaintiff;
20 James Dumas, Walt Cofer, and Billy Randles,
 Attorneys at Law,
21 Appearing on behalf of the Defendant.

22
23 Dennis Apodaca
 Official Court Reporter
24 556A Multnomah County Courthouse
 Portland, Oregon 97204
25 248-3180

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FOR THE PLAINTIFFS:

WILLIAM FARONE

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FOR THE DEFENDANTS:

Offered

Received

Exhibit No. 917

28

28

Friday, March 9, 1999

P R O C E E D I N G S

(Open court; jury not
present:)

THE COURT: I understand for the record
that there will be no offer of proof on the
video; is that right?

MR. GAYLORD: At least not at this time,
Your Honor. We are technically not ready yet.

THE COURT: Can you give me a preview,
Mr. Gaylord, what might come up Monday by way of
witnesses?

MR. GAYLORD: We have a witness from out
of town -- we are starting at 10:00 Monday, I
understand.

THE COURT: Actually, if we could start
at 9:30. I have got a nine o'clock asbestos
status conference. Those can take up to an
hour. If we get everybody here at 9:30, we
might be able to capture a little bit more time
in the morning. I think I will tell the jury
9:30, if that's workable.

1 MR. GAYLORD: My belief is we will have a
2 live witness who will take a significant chunk
3 of the day and leave time for a reading, which
4 may be one of our last readings, and then --

5 THE COURT: Is that the last witness that
6 is going to take a whole day on the plaintiff's
7 side?

8 MR. GAYLORD: I'm hoping it won't be a
9 whole-day witness. But it is the last one that
10 probably could.

11 MR. COFER: Is that Dr. Whelan, by any
12 chance?

13 MR. GAYLORD: Yes.

14 THE COURT: I'm just measuring this list
15 against a finite measure of hours.

16 MR. GAYLORD: Then we're going to have a
17 bunch of cameos.

18 THE COURT: Okay. I will believe you.
19 We have all our jurors. Are you ready
20 for them?

21 MR. COFER: I am, Your Honor.
22 Plaintiff ready for the jury?

23 MR. GAYLORD: Yes, Your Honor.

24 THE COURT: Bring them in, please.

25

1 (Open court; jury
2 present.)

3
4 THE COURT: Good afternoon, jurors.

5 THE WITNESS: Good afternoon.

6 THE COURT: Mr. Cofer.

7 MR. COFER: Thank you, Your Honor.

8

9 CROSS-EXAMINATION
10 (Resumed)

11 BY MR. COFER:

12 Q. One last question, I guess, on the chart.
13 And this is the one you say almost contains safer
14 tobacco?

15 A. Yes.

16 Q. Would you burn that product or would you
17 heat it? Would you actually light it on fire and
18 burn it like a cigarette?

19 A. You could.

20 Q. Would that in any way affect its safety?

21 A. Oh, yes.

22 Q. It would affect its safety?

23 A. Yes. You have the combustion pyrolysis.

24 You have to worry about the combustion pyrolysis
25 process so it would have to be tested under those

1 conditions.

2 Q. Come on down, if you don't mind, and we
3 will put this to rest and we will move on. Sorry
4 about that.

5 What I am trying to ask you is, could you
6 make it where it is almost safe and all the things
7 that you described and discussed and still burn
8 it?

9 A. That's the premise in this particular
10 model.

11 Q. Would you go ahead and write "burn" on
12 it, "burns." Underline that, please.

13 Two more questions. This goes to the
14 first one and the second one. Did you have any
15 reason to believe that Jesse Williams would have
16 smoked this product, your safe product that does
17 not have tobacco in it, had it been offered?

18 A. I don't know the answer to that.

19 Q. And the same question with respect to
20 Defense Exhibit 915, any reason to believe that if
21 that product was on the market, Mr. Williams would
22 have smoked that?

23 A. I don't have any knowledge of that, no.

24 Q. Thank you, Doctor.

25 Okay. You talked about the FTC method;

1 do you remember that?
2 A. Yes.
3 Q. In fact, I think you drew a rough chart
4 for the jury yesterday; talked about the decline
5 in tar and decline in nicotine. Do you recall
6 that?
7 A. That's correct.
8 Q. You told us -- generally represented how
9 they went down over the years, but obviously
10 wasn't an accurate representation to scale.
11 Correct, Doctor?
12 A. That's correct.
13 Q. Now, with respect to the FTC method, as I
14 understand it, what happens is there is a standard
15 protocol for how different brands of cigarettes
16 are evaluated, right?
17 A. Well, it is the same protocol for all
18 brands.
19 Q. Bad question.
20 FTC has a standard protocol how to
21 measure tar/nicotine in cigarettes?
22 A. That's correct.
23 Q. Don't hold me to this, but something like
24 35 milliliter puffs, right?
25 A. Correct.

1 Q. Drawn once every second or two seconds?

2 A. Yes.

3 Q. There is a standard puff volume?

4 A. Right.

5 Q. Now, it is true, isn't it, that at the
6 time the FTC method was instituted, the FTC
7 recognized this wouldn't tell you how much tar or
8 nicotine an individual smoker would get, right?

9 A. That's correct.

10 Q. The purpose was to make a comparison
11 between deliveries or yields from different
12 brands; is that correct?

13 A. That was one purpose, yes.

14 Q. And I guess the criticism of it has been,
15 to the extent people think that they are getting
16 the same yield listed in the ad, that may not be
17 true, right?

18 A. That's part of the criticism, and the
19 other part is how far away is it from what the
20 actual yields are. The method was developed at a
21 time when there weren't a wide variety of
22 low-yielding products.

23 Q. Now, I have read this. Tell me if this
24 is right. You mentioned that your wife used to
25 work for Philip Morris.

1 A. That's correct.
2 Q. And before she worked for Philip Morris
3 she worked at American Tobacco; is that correct
4 also?
5 A. That's correct.
6 Q. And she worked on helping develop this
7 FTC method?
8 A. She worked on developing the part of it
9 which is the pad on which the tar is collected.
10 Q. Is that a Cambridge filter pad?
11 A. That's what it is called, yes.
12 Q. The way it works, the machine draws the
13 smoke through a filter pad, right?
14 A. Correct.
15 Q. And whatever comes through is collected
16 on that pad and then analyzed, right?
17 A. No.
18 Q. Okay. What happens?
19 A. Well, whatever comes through that is
20 collected on the pad, is analyzed, but a lot of
21 stuff comes through that is not collected on the
22 pad.
23 Q. But what they do, they measure the tar,
24 nicotine that way, right?
25 A. Right. So whatever is collected on the

1 pad is measured, and the nicotine content of that
2 and the weight of that, the tar and the nicotine
3 content is measured. But if things are in the gas
4 phase, as I explained yesterday, and go through
5 the pad, then they wouldn't be measured.

6 Q. That's the whole free nicotine issue,
7 right? At least that's one of the issues you
8 discussed?

9 A. Free nicotine. There are reports, for
10 example, that a large percentage of flavor
11 compounds that are in tobacco end up in the gas
12 phase, so they would go through the pad and they
13 wouldn't be measured either.

14 Q. It is true, isn't it, that the FTC tells
15 the company how its measurements are to be taken;
16 to you use the FTC method?

17 A. Okay. Well, there is an agreement --
18 there is -- when you have protocol, everybody
19 agrees they are going to use that protocol. So I
20 think there is an agreement to use it.

21 Q. But the FTC developed it. Initially, the
22 FTC actually physically did the testing, right?

23 A. Yes. I think, if I remember the history
24 of this correctly, a concerted effort was made to
25 develop it. The industry was asked to be

1 participate in it. The industry provided
2 suggestions, and then from among the different
3 suggestions, I think there was even competition,
4 for example, as to whose smoking machine was going
5 to be used and all of that.

6 But they agreed on it and then the FTC
7 accepted that protocol as being theirs and
8 published it in the Federal Register, and that
9 became the protocol that they then said everybody
10 must use.

11 Q. Let me tell you where I'm going with
12 this. I told the jury in opening statement that
13 the FTC told the companies how the tar and
14 nicotine is to be measured and how it is to be
15 recorded; is that true?

16 A. Remember, it started off they asked the
17 companies, "How would you go about measuring
18 this?" So, yes, they told them, that the
19 companies had input into what they were told. It
20 isn't like the FTC came along and said, "Here is
21 what you have to do, I decree it." The companies
22 were involved in that decision.

23 Q. The FTC, "Give us your information, give
24 us your input, we will take input from others, we
25 will make the decision, here is our method."

1 Right?
2 A. That's correct.
3 Q. Now, you told us -- again, you drew just
4 kind of an off-the-cuff graphic representation of
5 how the tar and nicotine levels declined over the
6 years, right?
7 A. I did.
8 Q. It is true that tar and nicotine yields
9 in cigarettes as measured by the FTC method have
10 declined dramatically over the years, correct
11 Doctor?
12 A. Yes.
13 Q. We have talked about Deitrich Hoffman.
14 You are familiar with Dr. Hoffman, aren't you?
15 A. Yes.
16 Q. And his associate, Klaus Bruneman?
17 A. Not as familiar; I've read papers.
18 Q. Hoffman and Bruneman are both at the
19 American Health Foundation?
20 A. That's right.
21 Q. And they are Dr. Ernst Winters'
22 colleagues?
23 A. Going back way in time, yes.
24 Q. Would you recognize them as experts in
25 the field of measuring tar and nicotine changes in

1 cigarette design over the years?
2 A. They certainly have expertise, yes.
3 Q. Let me show you a chart.
4 MR. GAYLORD: No objection to the chart
5 for demonstrative purposes.
6 THE WITNESS: Thank you.
7 BY MR. COFER:
8 Q. Let me show you this, Doctor. You may be
9 able to see Your Honor's monitor. If not, you are
10 welcome to step down. Come on down.
11 A. (Witness complies.)
12 Q. What this chart illustrates -- and is it
13 in focus? Can you see it okay? I can tighten
14 up --
15 A. Not for me.
16 Q. Other way or other way? Tell me when I
17 get there.
18 Do you see it, Doctor?
19 A. Yeah, but I'm a lot closer. Yes, I can.
20 Q. Let me go through it. It is not very
21 clear. All right. I will read it to them.
22 What we have here is two lines. This
23 line, red line, shows nicotine, right?
24 A. Correct.
25 Q. This one shows tar, right?

1 A. Right.
2 Q. This shows the milligrams, the amount of
3 tar and nicotine running up the scale from 10 to,
4 it looks like, 36, correct?
5 A. No.
6 Q. To what?
7 A. No. This side shows the tar. This side
8 shows the nicotine.
9 Q. Thank you. This shows tar. This shows
10 nicotine. Going from 10 to 36 for tar; is that
11 right?
12 A. Correct.
13 Q. And from, what's that, 0.1 --
14 A. Yes.
15 Q. -- to 3.1 for nicotine?
16 A. Well, yes.
17 Q. Is that right?
18 A. Yes.
19 Q. Let me get one where we can see it
20 better, too.
21 Can you read that better?
22 A. Thank you.
23 Q. What this shows is -- what it represents
24 is over time how, as measured by the FTC method,
25 tar levels had declined, right?

1 A. Yes.
2 Q. And how nicotine levels had declined?
3 A. Correct.
4 Q. It also talks about the ways in which
5 that was act accomplished, correct, Doctor?
6 A. Yes.
7 Q. For example, up here at the top it says,
8 "Filters, porous papers, reconstituted tobacco,"
9 right, Doctor?
10 A. Yes, that's what it says.
11 Q. And you talked about that yesterday, that
12 those were all innovations that the companies had
13 made over the years, correct?
14 A. Correct.
15 Q. Down here further, it points to tip
16 ventilation, and you talked about that, right?
17 A. Yes.
18 Q. It talks about expanded tobacco. Do you
19 recall that?
20 A. Correct.
21 Q. Then you mentioned something else, the
22 length of the cigarette could have an effect.
23 Here, we see 85 with a filter. That's the length,
24 right?
25 A. Correct.

1 Q. Is that milligrams or millimeters?
2 A. Millimeters.
3 Q. Then this hundred would be a hundred
4 millimeters?
5 A. That's correct.
6 Q. And then down here, 120, right? 120
7 millimeters?
8 A. Millimeters.
9 Q. Again, what this shows is, according to
10 the FTC method, different innovations that
11 companies have introduced that has overall brought
12 tar and nicotine levels down, right?
13 A. Yes.
14 There is one point maybe we ought to
15 clarify.
16 Q. Okay.
17 A. That is that these designations don't
18 mean that all of the products made after that
19 point have that innovation.
20 Q. Thank you. That's an important point.
21 There is all different styles of
22 cigarettes in the market, right?
23 A. Correct.
24 Q. Some use filter ventilation, some don't?
25 A. That's right.

1 Q. In fact, there are still cigarettes that
2 don't even have filters on them, correct?

3 A. That's right.

4 Q. Some cigarettes use more expanded tobacco
5 than others?

6 A. That's correct.

7 Q. Some use more reconstituted leaf than
8 others?

9 A. Correct.

10 Q. Some use more blended leaf than others?

11 A. Correct.

12 Q. Really a wide variety within these basic
13 parameters; is that fair?

14 A. That's right.

15 Q. Okay. Now, let me flip this chart and
16 bring it out for the jury.

17 I'm going to ask you to make one more
18 chart for me. I will take that from you. What I
19 want to do, let's entitle this, "Ways to reduce
20 tar and nicotine."

21 A. I think if I stand on this side --

22 Q. We will make the list and we will step
23 back, and then talk about it to accommodate
24 everyone.

25 THE COURT: Except the court reporter has

1 to be able to see you.

2 BY MR. COFER:

3 Q. Make a list and add or subtract as you
4 agree or disagree.

5 Filtration is one way. You talked about
6 more porous paper, or paper porosity. Take your
7 pick. Reconstituted tobacco. Do you want to call
8 it "recon"? Is that how it is referred to? Let's
9 do reconstituted tobacco. Let's do the whole
10 thing.

11 Filter ventilation. Expanded tobacco.
12 Decreased circumference, or just circumference.

13 What we're talking about, how big around
14 the cigarette is. Would circumference affect tar
15 and nicotine?

16 A. Yes, it does. But I don't know that it
17 was specifically developed to do that.

18 Q. Let's put circumference down, and we can
19 talk about that.

20 And the last one I have is what I call
21 unconventional cigarettes. If you can think of a
22 better term, that's fine. I was thinking of
23 things that you mentioned earlier about heating
24 tobacco and not burning it. Is that fair?

25 A. Yes.

1 Q. Any others that you want to add?
2 A. Sure.
3 Q. Blend components. All right. Anything
4 else?
5 A. Let's see. Sort of an explanation of
6 what I have in mind there is nicotine content of
7 tobacco.
8 Q. Nicotine content of tobacco?
9 A. Right.
10 Q. Any others?
11 A. That will do.
12 Q. Okay. Why don't you return to your seat.
13 I will bring that over there and I want to talk
14 about some of those things.
15 MR. COFER: Now, for the record, let me
16 mark this as Defendant's Exhibit 916.
17 Can the jury see that.
18 (Jury indicates
19 affirmative.)
20 BY MR. COFER:
21 Q. Let's start with filters at the top. You
22 would agree, wouldn't you, that filters were one
23 of the biggest innovations in cigarette design?
24 A. For the reduction of tar and nicotine?
25 Q. Yes.

1 A. Yes.

2 Q. In fact, back in the 1950s, over half of
3 the adults in the country smoked, right?

4 A. Yes.

5 Q. 90 percent smoked unfiltered cigarettes
6 in 1950, sound about right?

7 A. Sounds about right.

8 Q. Now, today, approximately 25 percent of
9 Americans smoke, right?

10 A. That's correct.

11 Q. And you would agree that 97 percent of
12 all cigarettes sold are filtered?

13 A. I don't know the exact number, but
14 something on that order.

15 Q. Now, most filters today are made from
16 cellulose acetate; is that right?

17 A. That's right.

18 Q. Could you tell the jury what cellulose
19 acetate is?

20 A. It is a polymer, a material from taking
21 cellulose and treating it with acetic acid, which
22 is like vinegar, and it makes cellulose acetate,
23 which has also been used in articles of clothing,
24 like I think the trade name is rayon is cellulose
25 acetate.

1 Q. Is the cellulose like the cellulose that
2 you talk about in your cigarette with tobacco
3 that's a bit more safer?

4 A. The cellulose part is, yes.

5 Q. Do you agree that cellulose acetate
6 filters are effective in reducing tar and
7 nicotine?

8 A. In reducing tar and nicotine, yes.

9 Q. You did work on filtration while you were
10 at Philip Morris, correct, sir?

11 A. That's correct.

12 Q. In fact, you had a whole project on
13 selecting filtration?

14 A. That's right.

15 Q. And selecting filtration goes to
16 selective reduction, right?

17 A. Correct.

18 Q. And just so I make sure that we're all on
19 the same page, by "selective reduction," that's
20 when you try to take specific compounds like
21 nitrosamines or aldehydes, or whatever, and remove
22 those selectively?

23 A. Yes. Remove them is the key. The
24 difference between what we were doing and just
25 generically, sometimes you will get selective

1 changes --

2 Q. Right.

3 A. -- as you design a cigarette. But we
4 were trying to actually remove certain compounds,
5 like the tobacco-specific nitrosamines
6 selectively.

7 Q. And you supervised projects to do that?

8 A. That's correct.

9 Q. Next, porosity. I think you told the
10 jury yesterday that with porous paper a couple of
11 things happen. One, you let more air into the
12 cigarette.

13 If I could find the cigarette.

14 Porous paper allows air to come into the
15 cigarette?

16 A. Yes.

17 Q. And it allows gases to escape?

18 A. That's right.

19 Q. Is it fair to say that by the mid to late
20 1950s Philip Morris and the other manufacturers
21 were moving towards more porous paper?

22 A. By when?

23 Q. Mid to late '50s.

24 A. That's about right.

25 Q. More porous paper tends to reduce tar,

1 doesn't it?
2 A. It can be, depending on how it is used
3 with the rest of the parameters. You can have
4 more porous paper and not reduce tar as much, yes.
5 Q. All these being equal -- we will go
6 through the design parameters -- you can use
7 porous paper to reduce tar?
8 A. Yes.
9 Q. Reduce nicotine?
10 A. Yes.
11 Q. Reduce carbon monoxide?
12 A. Yes.
13 Q. Reduce tobacco-specific nitrosamines?
14 A. I don't recall the actual reducing the
15 amount. You mean because it generally reduces all
16 the tar? Yes.
17 Q. Benzopyrene?
18 A. Yes.
19 Q. And benzopyrene is a PAH, polycyclic
20 aromatic hydrocarbon, right?
21 A. Yes.
22 Q. You would agree the use of porous paper
23 was a significant advance in cigarette design,
24 right?
25 A. I would.

1 Q. The people working under you in Applied
2 Research worked on more porous paper projects,
3 right?

4 A. They did.

5 Q. Reconstituted tobacco. You talked about
6 that yesterday and, in fact, you drew that
7 cigarette. I don't know whether we still have it.

8 MR. COFER: Do you have the cigarette
9 that he drew?

10 BY MR. COFER:

11 Q. Basically recon is the blended leaf?

12 A. Or the reconstituted leaf.

13 Q. Or the reconstituted leaf?

14 A. Correct.

15 Q. When did blended leaf come into use in
16 cigarettes?

17 A. I believe it was the late '50s.

18 Q. And you told the jury yesterday what the
19 BL process is.

20 A. That's the band cast process, yes.

21 Q. And reconstituted leaf was used at
22 Philip Morris before you started, right?

23 A. That's correct.

24 Q. Now, the RL, reconstituted leaf, it
25 reduces or delivers less phenols?

1 A. Yes.
2 Q. Phenols are one of the things thought to
3 be problematic in cigarette smoke?
4 A. That's correct. Strong irritants.
5 That's an issue of more direct toxicity.
6 Q. It also reduces benzopyrene, correct?
7 A. Yes.
8 Q. You would agree that the use of RL is a
9 step in the right direction with regard to
10 reducing tar?
11 A. Correct.
12 Q. And a step in the right direction with
13 respect to reducing biological activity, right?
14 A. Correct.
15 Q. Ventilation. Let's talk ventilation. As
16 I understand it, the idea behind filtered
17 ventilation is you put some holes in the filter
18 and then as the smoker inhales, it brings air into
19 the mix, diluting the tar and nicotine, the smoke,
20 right?
21 A. Correct.
22 Q. Now, where the controversy is that
23 developed in this case is where the filter holes
24 are located. Have you heard about that?
25 A. Well, yes, but that's only one of the

1 potential controversies.

2 Q. We can talk about the others.

3 The problem alluded to, I believe, in
4 Dr. Benowitz's testimony, I believe, was that
5 depending on where the holes are placed, a smoker
6 could cover them up with his or her fingers, or
7 with their lips, right?

8 A. That's correct.

9 Q. And I think the term is "occlude."

10 A. That's correct.

11 Q. And if you cover them up, then you are
12 not going to get that ventilation, right?

13 A. Correct.

14 Q. Now, you have to be careful where you
15 place these things for other reasons, where you
16 plays the holes for other reasons, too, right?

17 A. That's correct.

18 Q. If you put the holes too far away from
19 the smoker's mouth, you effect what is known as
20 pressure drop?

21 A. That's correct.

22 Q. That means it is hard to smoke, right?

23 A. It increases the needed draw in order to
24 get the same amount of tar or nicotine.

25 Q. Smoker has to suck on it harder?

1 A. Correct.
2 Q. That affects things, the subjectives.
3 Smokers don't like to have to suck real hard,
4 right?
5 A. That's correct.
6 Q. But if you get it too close, you get the
7 occlusion problem?
8 A. Too close to --
9 Q. To the smoker's mouth.
10 A. Yes.
11 Q. I don't know whether these things have
12 vent holes or not. Show the jury if this were any
13 cigarette where they would be located on the
14 filter.
15 A. Tell you what happens to eyesight. I
16 used to be able to identify them.
17 Q. Give the general area.
18 A. (Witness complies.)
19 Q. Thank you.
20 MR. COFER: May I walk over and show them
21 approximately?
22 THE COURT: Mark it as an exhibit and
23 then they will have a demonstrative tool. I
24 assume there is no objection.
25 MR. GAYLORD: No objection.

1 MR. COFER: Exhibit 917.

2

3 (Whereupon, Defendant's
4 Exhibit No. 917 was
5 received in evidence.)

6 BY MR. COFER:

7 Q. While he is doing it, you put it right
8 there, right?

9 A. I did.

10 Q. Thanks.

11 Let me ask this, Dr. Farone, how did you
12 decide where the vent holes were to be placed?

13 A. Well, I think I indicated yesterday we
14 developed a very sophisticated computer model of
15 how smoke, tar, nicotine and everything in the
16 smoke is delivered from the cigarette as it is
17 burned. And one of the things that you can do in
18 that model is to put in different places for the
19 holes, different-sized holes, different number of
20 holes, and you can use the model to predict what
21 the pressure drop would be across the entire rod,
22 across the entire product. And you can also use
23 it to predict what the delivery will be.

24 So if, in fact, the objective was to
25 deliver a certain tar/nicotine ratio from a

1 certain blend of tobacco, you could calculate it
2 from the model and see where the holes should be
3 placed.

4 Q. Now, when you were deciding where to
5 place these things, you knew about the potential
6 problem of occlusion or covering them up, right?

7 A. Not in the very beginning, but very
8 close to -- that happened very quickly.

9 Q. Did you make an effort to place them
10 somewhere where they wouldn't get occluded?

11 A. Well, it turns out that the best place to
12 put them is where they wouldn't normally be
13 occluded. So occlusion wasn't, in the beginning,
14 that wasn't the driving force. It was the little
15 incident with the Barclay cigarette --

16 Q. I want to follow up on that.

17 MR. COFER: May I show this to the jury?

18 THE COURT: Yes.

19 MR. COFER: Should I pass it or show it
20 to them?

21 THE COURT: Pass it by them. They will
22 have it in the jury room. They can examine it
23 during deliberation.

24 BY MR. COFER:

25 Q. Barclay. Tell the jury about came

1 Barclay.
2 THE COURT: Hold on.
3 JUROR SMITH: It might be helpful to put
4 it on the viewer thing, because I really can't
5 see. Okay.
6 BY MR. COFER:
7 Q. Can you see that, Doctor? Am I pointing
8 to the place that you marked?
9 A. Yes.
10 Q. Barclay. Brown & Williamson made a
11 cigarette called "Barclay," right?
12 A. Correct.
13 Q. It was called an ultra-low tar or
14 low-tar, delivered tar and nicotine?
15 A. I think, if I recall, it was three or
16 four milligrams of tar.
17 Q. R.J. Reynolds wasn't really happy with
18 B&W, were they?
19 A. That's correct.
20 Q. Wrote the FTC, didn't they?
21 A. Yes.
22 Q. R.J. Reynolds told the FTC that Brown &
23 Williamson was trying to beat the smoking machine;
24 isn't that right?
25 A. That's right.

- 1 Q. Said that Brown & Williamson had monkeyed
2 with Barclay and they were suggesting to smokers
3 that they were getting a lower delivery than they
4 really were, right?
- 5 A. Correct.
- 6 Q. Resulted in a lawsuit?
- 7 A. That's correct.
- 8 Q. Ventilation is effective in reducing tar
9 and nicotine, right?
- 10 A. That's correct.
- 11 Q. You talked about when you came to the
12 company there were two methods used to put these
13 little holes in. Do you remember that?
- 14 A. Yes.
- 15 Q. One was mechanical, like a pin and poked
16 holes in them?
- 17 A. Right.
- 18 Q. One was electrostatic?
- 19 A. Yes.
- 20 Q. And you came up -- or your group came up
21 with a laser process, right?
- 22 A. Yes. Not me, the people working for me.
- 23 Q. State-of-the-art high-tech stuff, right?
- 24 A. Correct.
- 25 Q. What did I skip?

1 Let's go to expanded tobacco. Have we
2 talked about expanded tobacco yet?

3 A. No.

4 Q. Well, expanded tobacco is -- basically,
5 it is just puff tobacco, right?

6 A. It is returning the tobacco back to its
7 original shape, yes.

8 Q. Because tobacco, while it has been
9 processed, will dry out, right?

10 A. Both of the processes for making Burley
11 and Bright caused them to dry out, yes.

12 Q. So what you want to do, you find a way to
13 puff it back up?

14 A. That's right.

15 Q. You have heard it described as
16 popcorn-like, or what other analogies?

17 A. That's not a good analogy because popcorn
18 you are actually going past the original size.

19 Q. Exploding the kernel. What is a good
20 analogy?

21 A. Most people, I think, can understand if I
22 take a dried leaf that shrivels up and if I put
23 something back in it, like the water, and expand
24 it back up again. And if I were to magically
25 remove that liquid and sort of freeze the leaf in

- 1 the expanded position, it would have its original
2 shape.
- 3 Q. So what expanded tobacco does for you, it
4 takes up more space in the tobacco rod?
- 5 A. That's correct.
- 6 Q. So when you take up more space in the
7 tobacco rod, as you burn the tobacco, there is
8 less tobacco to burn, correct?
- 9 A. That's correct.
- 10 Q. If there is less tobacco to burn, there
11 is less tar and less other bad stuff for the
12 smoker to inhale, correct?
- 13 A. That's right.
- 14 Q. So expanded tobacco was another way of
15 lowering tar/nicotine yields, correct?
- 16 A. Correct.
- 17 Q. And, in fact, under your direction, your
18 group was actively involved in improving the
19 expanded tobacco process, correct, Doctor?
- 20 A. That's correct.
- 21 Q. We have talked a little bit about the
22 temperature at which the coal of cigarette burns,
23 right?
- 24 A. Right.
- 25 Q. I think it is, what, 800, 900 degrees

1 Celsius?
2 A. 900 degrees Celsius.
3 Q. That's 1,500 to 2,000 Farenheit?
4 A. About 2,000 Farenheit.
5 Q. The thinking is if you can reduce the
6 temperature of that burning coal, you can reduce
7 the formation of smoking some of the bad stuff,
8 right?
9 A. As we discussed earlier, as long as you
10 don't go too low. If there is an intermediate
11 temperature. If you go too low, you get the
12 aldehydes. You have to watch it.
13 Q. Watch how you do it. If you can reduce
14 it some, you can bring the PAHs down?
15 A. That's right.
16 Q. That was number three on your list?
17 A. Yes.
18 Q. But if you get it too low, you drive up
19 the aldehydes; that was number two?
20 A. That's correct.
21 Q. Do you think it can be just as misleading
22 to tell part of the story as not tell a story at
23 all?
24 A. It depends on the story.
25 Q. Let me ask you this: If you only tell

1 someone part of the facts, can that create
2 problems, too?

3 A. You can tell part of the facts in a way
4 that would -- I would have to have a specific
5 example.

6 Q. Context is important; you agree with
7 that?

8 A. Context is important.

9 Q. Plaintiff's Exhibit 36. Yesterday
10 plaintiffs showed the jury Plaintiff's Exhibit 36
11 and discussed it with you. And they highlighted
12 two things.

13 This is an August, 1959 memorandum. It
14 is going to be hard to read. They highlighted,
15 "Why do people smoke." Can you see that?

16 A. Not really, but I know it is there.

17 Q. Do you want to come over by me?

18 Do you recall this document?

19 A. Yes.

20 Q. "Why do people smoke?" They also
21 highlighted the third reason, "Addiction"?

22 A. Right.

23 Q. Do you recall that?

24 A. Yes.

25 Q. Those were the two things that were

1 discussed in the document. Do you remember that?

2 A. Yes.

3 Q. Let's look at the other things that are
4 in the document. This is "Why do people smoke?"
5 The first reason is that there is a Subheading A,
6 "Physiological reasons." Did I read that
7 correctly?

8 A. Yes.

9 Q. Number one, "Essentialism: The
10 gratification of senses of touch, taste, smell,
11 sight, such as oral satisfaction, digital
12 satisfaction," et cetera.

13 Did I read that correctly?

14 A. Yes.

15 Q. That's the first thing listed, right?

16 A. That's the first thing there.

17 Q. Second thing, "Stimulation or
18 relaxation."

19 Did I read that correctly?

20 A. Yes.

21 Q. Is that what -- it is Nessbitt's Paradox,
22 or what is it called?

23 A. Nessbitt's Paradox.

24 Q. It is true that one thing about
25 cigarettes, nicotine. They can relax at times or

1 they can stimulate at times?

2 A. It is thought that they are operating on
3 two different sensory places. For example, you
4 could depress your central nervous system --

5 Q. Right.

6 A. -- and excite or enhance the peripheral
7 nervous system. So you could have both effects
8 going at the same times.

9 Q. That was Nessbitt's Paradox, published in
10 the scientific literature?

11 A. Correct.

12 Q. The third thing, and this is what was
13 pointed out to you, is addiction, right?

14 A. Correct.

15 Q. Have you testified in the past that
16 Philip Morris is reluctant to use the word
17 "addiction" in their documents?

18 A. Yes.

19 Q. Here is an example where they did; is
20 that correct?

21 A. Yes.

22 Q. "Four, psychological reasons. One,
23 subconscious reasons: A, conformity, B,
24 nonconformity. Simple exhibitionism."

25 Did I read that correctly?

1 A. Yes.
2 Q. Now, it is true, isn't it, that the major
3 reason people start to smoke is peer pressure?
4 A. Well, I have heard that said, yes.
5 Q. You would agree a major reason people
6 start is peer pressure?
7 A. I would.
8 Q. In fact, have you ever heard about
9 conformity, nonconformity in --
10 A. Right.
11 Q. -- peer pressure, conforming with a
12 group, standing out from a group, correct?
13 A. Correct.
14 Q. In fact, there are people who don't even
15 like to smoke but smoke because they want to be
16 part of the crowd, right? You have heard of that,
17 haven't you?
18 A. I have heard of that, but I don't have
19 any information on whether that's -- I don't have
20 any information how deep a cause that is.
21 Q. Have you ever heard about people smoking
22 and when they go to new friends or new places or
23 they move, they stop?
24 A. I suppose that could happen.
25 Q. Next is "Habit." Did I read that

1 correctly?
2 A. You did.
3 Q. Now, here they have "addiction" up here.
4 Right?
5 A. Correct.
6 Q. And "habit" down here?
7 A. Yes.
8 Q. So at least this author is making a
9 distinction between addiction and habit, right?
10 A. That's correct.
11 Q. The next is "possessiveness," and then
12 "transient focus of attention," and then
13 "boredom," right?
14 A. Yes.
15 Q. Now, we are down to the conscious
16 reasons. Again, conformity, sociability, ritual,
17 mimicry or stereotype, amicability, nonconformity,
18 sophistication, individual freedom.
19 And that's the end of the list as to why
20 people smoke, right? At least this author's list?
21 A. Yes.
22 Q. Now, he or she goes into, "Why don't
23 people smoke?" First reason, "Physiological
24 reasons. One, adverse physical reaction."
25 Did I read that correctly?

1 A. Yes.
2 Q. A cough?
3 A. Yes.
4 Q. "B, nicotine drug reaction," right?
5 A. Correct.
6 Q. Now, this is a Philip Morris document,
7 internal document, 1959, right?
8 A. Yes.
9 Q. And here they are saying one reason
10 people don't smoke is because the nicotine drug
11 reaction, right?
12 A. Yes.
13 Q. The next one, "nausea," et cetera, right?
14 A. Yes.
15 Q. I have trouble saying this,
16 "carcinogenesis," right?
17 A. Right.
18 Q. That's cancer, right?
19 A. Yes.
20 Q. Next reason, "physical dislike: Taste,
21 odor, touch."
22 A. Yes.
23 Q. "Staining on hands and teeth," right?
24 A. Yes.
25 Q. Which takes us to Page 3.

1 Psychological reasons, subconscious
2 reasons, and again this is reasons this author is
3 speculating why people don't smoke, right? "Fear
4 of the new or different," right?
5 A. Yes.
6 Q. "Fear of fire," right?
7 A. That's what he says.
8 Q. "Conformity, nonconformity," again?
9 A. Right.
10 Q. That peer pressure thing, cutting both
11 ways, right?
12 A. Right.
13 Q. "Conscious reasons: Fear for health
14 reasons," right?
15 A. Yes.
16 Q. A recognition in 1959, some people didn't
17 smoke because of fear of health reasons, right?
18 A. Correct.
19 Q. "Economics, cleanliness, conformity,
20 sociological stigma, parental respect."
21 Did I read that correctly?
22 A. Yes.
23 Q. And then finally, again, nonconformity,
24 correct?
25 A. Correct. (The witness resumed the

1 stand.)

2 Q. You told the jury yesterday that every
3 scientist at Philip Morris you talked with
4 accepted the proposition that cigarette smoking
5 causes cancer, right?

6 A. Well, I think I worded it in a more
7 scientific manner than that.

8 Q. You probably did. How did you word it?

9 A. It has to do with the hypothesis. When
10 you do science, you work under a hypothesis. What
11 I said, I believe, was that while I was there
12 no one refuted the hypothesis. People would come
13 up with reasons why it might not be true, but no
14 one said it is not true, which is a refutation of
15 the hypothesis.

16 Q. I'm going to give you another chance to
17 have you educate me, then I want to talk in lay
18 terms. I wasn't a very good science student.

19 What I understood the scientific
20 hypothesis was is that if a person had a
21 hypothesis, then it was incumbent upon that person
22 to prove the hypothesis, scientific method, right?

23 A. No, you got it wrong.

24 Q. Educate me.

25 A. Okay. Usually you develop a hypothesis

1 based on observation. So you have observations
2 that you make and that leads to the hypothesis.

3 Now, because of limitations in physical
4 science, you really can't prove things.
5 Statistics gets in your way. You can't even prove
6 how close that is to that, these two positions on
7 this table here, to a very high degree of
8 precision.

9 So what you do is you test the
10 hypothesis. And if you cannot refute it, in other
11 words, if you don't find any reason to refute
12 it -- for example, the sun moves around the earth.
13 That was an early hypothesis. People stated that
14 because it looks like that way. You get up in the
15 morning, it comes up. It goes down. It looks
16 like it is moving around the earth. People accept
17 the hypothesis until there is disproof. Finally,
18 people realized the earth went around the sun. So
19 that becomes the new hypothesis, which stands
20 until it is disproven.

21 So a hypothesis is a conclusion based on
22 observation of facts that stands until you come up
23 with evidence to the contrary.

24 Q. Okay. So to some extent does that
25 require then a person attacking a hypothesis to

1 prove a negative?

2 A. It requires them to disprove the
3 hypothesis, not prove a negative. They have to
4 find evidence that would change the general
5 conclusion of that hypothesis.

6 Q. Okay. Well -- and maybe that isn't
7 scientific. Let me see if I can bring it to
8 something I understand.

9 The point I thought you were making to
10 the jury was, that all of the scientists at
11 Philip Morris, the ones you worked with, working
12 on product development and the rest of them, from
13 a working standpoint, pretty much accepted the
14 premise that cigarettes caused disease, right?

15 A. That's correct.

16 Q. Now, if your job was to try to make a
17 safer product, if your job was to try to reduce
18 risk, you would want to start with that premise,
19 wouldn't you?

20 A. Well, not only want to, I think I
21 indicated that I don't see how you can proceed in
22 making something safer unless you try to determine
23 the way in which it is not safe.

24 Q. That's exactly right. If you started
25 with the proposition, "These things are safe, I

1 don't need to fix them," you wouldn't get very
2 far, would you?

3 A. That's correct.

4 Q. You would have no incentive to look,
5 right?

6 A. Correct.

7 Q. So the responsible thing to do from a
8 research standpoint, for purposes of trying to
9 improve that product, is to accept the hypothesis,
10 people are right. We have carcinogens. We have
11 carcinogenic compounds. More tar is bad. Let's
12 find ways to reduce tars. Let's find ways to do
13 specific reduction. Let's address these
14 criticisms of our product. Right?

15 A. That's correct.

16 Q. Now, that's not the same thing as saying,
17 "We accept proof of a biological mechanism," or
18 "We accept proof that statistics can prove
19 causation." You can argue about those things, but
20 what you are doing is you are accepting the
21 premise from a product development standpoint,
22 correct, Doctor?

23 A. No -- well, I don't agree with all of
24 that.

25 Q. Okay. We agree they accepted that

1 premise from a product development standpoint?

2 A. I agree we accepted the premise.

3 Q. If you accept the premise, does it follow
4 that you can see the biological mechanism by which
5 a healthy cell turns cancerous is proven?

6 A. If there is a hypothesis that a healthy
7 cell turns cancerous, for example, because PAH
8 enters that cell, attacks a piece of the DNA and
9 causes it to change, you can't deny that
10 hypothesis until you come up with evidence to the
11 contrary.

12 So if you deny that hypothesis, just
13 because you don't want to do the research or you
14 don't want to admit that, that's not very
15 scientific.

16 Q. Let me ask you this: Has anyone proven
17 how a healthy cell turns bad, the specific
18 mechanism?

19 A. I believe they have.

20 Q. Really?

21 A. Yes.

22 Q. Are you referring to the Science article?

23 A. I'm referring to the literature in
24 general about how mutagens and carcinogens attack
25 cells linked to DNA, or get involved in the

1 replication mechanism of the cell. This is taught
2 in most biology courses now.

3 Q. Your testimony, now, is, we know the
4 mechanism by how something turns a healthy cell
5 into a cancerous cell?

6 A. We know the general mechanism, and we are
7 learning more about the specific sites of attack.
8 The Science article talked about a specific site
9 of attack of PAHs; I think that's the one.

10 Q. Benzopyrene?

11 A. Benzopyrene, yeah. To a specific
12 location in the DNA.

13 Q. And let's talk about that. There was a
14 Science article that said, and correct me if I
15 misstate it, that benzopyrene, which is one of the
16 PAHs in tobacco --

17 A. That's correct.

18 Q. -- that you can see where that interacts
19 with a cell, what, P53 or KRAS?

20 A. P53.

21 Q. You can see specifically where that
22 benzopyrene gloms on?

23 A. Right.

24 Q. You can go in and test it and you can
25 determine that this cancer was caused by an

1 interaction with benzopyrene, right?
2 A. That's correct.
3 Q. P53, KRAS mutations, correct?
4 A. Correct.
5 Q. That's something you can do. You can
6 take part of the material, the cancer cell, you
7 can do a series of sophisticated tests, right?
8 A. Right.
9 Q. You can determine, according to that
10 Science article, whether benzopyrene initiated
11 that change, that mutation that led to
12 carcinogenesis?
13 A. That's the essence of the article, yes.
14 Q. Well, do you think that's valid science?
15 A. Yes. What I was referring to is, before
16 we knew about that specific one, because you would
17 have to develop a specific one for every chemical,
18 mutagen, for every carcinogen. You still know the
19 general mechanism. You know it is going in there
20 and attacking a site, you just don't know which
21 one it is.
22 So it would be unprofessional, in my
23 opinion, to deny that mechanism of causation
24 simply because you don't know the exact sites.
25 You couldn't say no one has proved this because I

1 don't know what the site is.

2 Q. Stay with me on this. So then if the
3 Science article is right and you have the tissue
4 for a cancerous cell, you could go in and test it,
5 using the P53, KRAS mutations and determine
6 whether that change is caused by benzopyrene?

7 A. That's only one of the potential
8 carcinogens, right.

9 Q. That's one you could do?

10 A. Yes, if, in fact, it is easy to do and
11 reproduceable, and all of that, yes.

12 Q. Have you ever heard of a Dr. Samuel
13 Hammer?

14 A. I don't recall the name right now.

15 Q. Anyhow, where I was when I started all
16 this, the scientists at Philip Morris who worked
17 on making safer cigarettes, started from the
18 premise that there was something to fix, right?

19 A. That's correct.

20 Q. Plaintiff's Exhibit 42. Do you want to
21 step down to the monitor? Why don't you try the
22 monitor.

23 Do you remember this, "Tobacco and Health
24 R&D approach. Dr. H. Wakeham, November 15, 1961
25 Philip Morris Incorporated," right?

1 A. Yes.
2 Q. Let's turn to the first page. You told
3 the jury that there wasn't -- well, that it was
4 Dr. Osdene's job, essentially, to keep the
5 controversy going, right?
6 A. Yes.
7 Q. And you told the jury that
8 Philip Morris -- I'm sorry, you want to add
9 something?
10 A. That's what Dr. Osdene told me.
11 Q. You told the jury that Philip Morris
12 didn't like to use the words "cancer" and
13 "carcinogenesis", right?
14 A. Yes. I was there from '76 to '84.
15 Q. Yes, but you also told the jury that
16 before you came you reviewed all these old
17 documents. That was part of the scientific
18 method?
19 A. That's correct.
20 Q. You would know what had gone on before so
21 you could work to make a safer cigarette?
22 A. That's right.
23 Q. So you reviewed this stuff so you could
24 do your job?
25 A. Correct.

1 Q. Let's look at the cover page. Item two,
2 "The Cancer Controversy. Evidence linking cancer
3 to tobacco. The problem of carcinogen
4 identification. Cancer-promoting agents in
5 cigarette smoke. Phenols in cigarette smoke.
6 Anti-carcinogens."

7 What are anti-carcinogens?

8 A. Well, if I remember this correctly, an
9 anti-carcinogen would be in this timeframe of
10 1961, early '60s, is a compound that might
11 interfere with a mutagen or cancer-causing
12 compound.

13 Q. Was there evidence in the literature to
14 suggest that there were anti-carcinogens in
15 tobacco and tobacco smoke?

16 A. Yes, there still is.

17 Q. And these anti-carcinogens are things
18 that interfered or neutralized carcinogens?

19 A. Yes, there are several mechanisms by
20 which they can do it. They either interfere with
21 the mechanism at the cell level, or they can
22 chemically interfere with the carcinogen itself.

23 Q. And that stops the tobacco in cigarette
24 smoke, too, anti-carcinogens?

25 A. Yes.

1 Q. Again, this a Philip Morris document,
2 "The Cancer Controversy." Some definitions, they
3 define carcinoma, carcinogen, tumor promoter,
4 anti-carcinogen, right?

5 A. Yes.

6 Q. Here, in the Philip Morris document, they
7 talk about evidence linking cancer, tobacco based
8 on two main points, statistical or
9 epidemiological, right?

10 A. Correct.

11 Q. And physiological, and these are these
12 skin-painting tests and other tests, Ames assays,
13 in vitro, in vivo, that sort of stuff, right?

14 A. Correct.

15 Q. The problem of carcinogen identification.
16 Many factors need to be considered when studying
17 carcinogenesis. They cite Greenstein, they are
18 citing some outside literature, right?

19 A. Correct.

20 Q. Cancer-promoting agents and cigarette
21 smoke. It is also thought that there are some
22 components in smoke that may not be carcinogenic
23 but they promote cancer?

24 A. Co-factors.

25 Q. What did you call them?

1 A. Co-factors.
2 Q. And here, they cite an article from the
3 British Journal of Cancer, correct?
4 A. Correct.
5 Q. Here is one on anti-carcinogens, and they
6 list a number of things. I don't what they are.
7 They are a number of compounds, right?
8 A. Correct.
9 Q. "Some possible ways to reduce carcinogens
10 in tobacco smoke: Discover major precursors for
11 carcinogens in cancer promoter. Discover
12 mechanism or conditions by which carcinogens are
13 produced and modify those conditions.
14 Select tobaccos which produce a no-load
15 percentage."
16 That was some of the stuff you were
17 talking about this morning?
18 A. Correct.
19 Q. Add anti-carcinogens?
20 A. Right.
21 Q. Additives?
22 A. Yes.
23 Q. Stuff that wouldn't be found naturally in
24 tobacco, but add things to it?
25 A. Well, it could also be found in tobacco,

1 but not in a level significant enough to cause the
2 anti-carcinogenic reaction.

3 Q. Okay. Discover differences in
4 particulate fractions which will permit separation
5 of carcinogenic smoke, correct?

6 A. Right.

7 Q. Thank you.

8 You talked about nicotine in your direct
9 examination and the effect of nicotine, whether it
10 is addictive, right?

11 A. Correct.

12 Q. Now, you are not a pharmacologist, right?

13 A. That's correct.

14 Q. Not a psychiatrist?

15 A. That's correct.

16 Q. Not a psychologist?

17 A. Correct.

18 Q. Not a toxicologist, although you
19 supervise them?

20 A. Right.

21 Q. Never worked on smoking cessation or stop
22 smoking clinics, have you?

23 A. As a clinician?

24 Q. As a professional person.

25 A. No, that's correct.

1 Q. You are not an expert in addiction? Are
2 you?

3 A. I have expertise, but I don't know what
4 that means in terms of being expert. I'm not
5 saying an expert in addiction.

6 Q. Your group, Applied Research, did no work
7 on whether nicotine is addictive, right?

8 A. That is correct.

9 Q. That work was done by others?

10 A. Correct.

11 Q. Involved people like Bill Dunn, and Vic
12 DeNoble, right?

13 A. Correct. Carolyn Levy and other people,
14 yes.

15 Q. Now, you talked about DeNoble's lab and
16 you talked about it being shut down, right?

17 A. Correct.

18 Q. The fact is, Vic DeNoble didn't believe
19 that cigarette smoke was addictive, right?

20 A. That's incorrect.

21 Q. Okay. Let me show you what has been
22 marked Defendant's Exhibit 632. This is in
23 evidence. If you like, you can step down, or I
24 will hand you a copy.

25 A. I think I know what they are.

1 Q. Okay. This is a July 23, 1980
2 memorandum, right?
3 A. Correct.
4 Q. It is written by Drs. DeNoble, Dunn,
5 Osdene and Ryan, correct?
6 A. Correct.
7 Q. It is entitled "Self-administration,
8 Reinforcement, Addiction," right?
9 A. Yes.
10 Q. You are familiar with this document?
11 A. I am.
12 Q. You have seen it before?
13 A. I have.
14 Q. We can go through all of it. Let me get
15 down to the bottom line, then we can talk about
16 it.
17 "The tentative conclusion seems clear.
18 Nicotine is a reinforcer in the class of
19 nonaddictive chemical compounds such as saccharin
20 or water."
21 Did I read that correctly?
22 A. You read it correctly.
23 Q. Let me run through a couple of more
24 because my sense is you're going to want to talk
25 about this a little bit.

1 A. Correct.
2 Q. Is that fair?
3 A. Fair.
4 Q. Let's go through the documents first and
5 then we can talk about what they mean.
6 A. All right.
7 Q. This is Defendant's Exhibit 638. This is
8 a memo from Dr. DeNoble to Dr. Jim Charles,
9 March 16, 1983; is that right?
10 A. That's correct.
11 Q. The bottom of Page 2, he writes, "The
12 data shows that nicotine does not produce a
13 physical dependence," as a cite. "This finding
14 has been replicated using other animal test
15 systems for physical dependence with similar
16 results. The animal data and the data collected
17 with humans do not support the hypothesis that
18 prolonged exposure to nicotine or tobacco results
19 in a physiological dependence."
20 Did I read that correctly?
21 A. You read it correctly.
22 Q. The last one in this series, 678, again,
23 this has been admitted. This is Dr. DeNoble to
24 Osdene, October 22, 1980. This preceded that last
25 document, but I want to use it to put the

1 dependence in context.

2 The review references here, a critique of
3 National Institute on Drug Abuse, technical review
4 on cigarette smoking as an addiction. First
5 sentence, "The review represents an attempt to
6 classify cigarette smoking as an addiction.
7 However, most of the evidence is fantasy, not
8 fact. Clearly, self-administration techniques
9 establish the reinforcing properties of the
10 stimulus event, not its addiction potential.
11 There is considerable evidence that nicotine is a
12 reinforcing agent. Animals self-administer
13 nicotine. It does not appear to be a particularly
14 powerful reinforcer compared to other compounds.
15 Similarly, work within our own laboratory suggests
16 that nicotine self-administration does not fit the
17 accepted criteria for drug dependence and it falls
18 into the class of more conventional
19 self-administered reinforcers, e.g., food,
20 saccharin, et cetera, that do not produce physical
21 dependence."

22 Did I read that correctly?

23 A. You read it correctly.

24 Q. "While there is mounting evidence that
25 nicotine can and does function as a reinforcer" --

1 parenthetical, reward -- "reward" another word for
2 reinforcer -- "there is no clear data as to its
3 physical dependence-producing properties."

4 Did I read that correctly?

5 A. You read it correctly.

6 Q. "The authors infer that physical
7 dependence to nicotine resembles that produced by
8 opiates or sedatives. The statement is made
9 without further elaboration and with no supportive
10 evidence. Furthermore, the magnitude of the
11 withdrawal syndrome produced by removal of these
12 substances is so severe death can result. I'm
13 unaware of any similarity in smoking termination."

14 Right, that's what he wrote?

15 A. That's what he wrote.

16 Q. "Recommendations: It is our position
17 that the data presented was selected to fit a
18 particular need to regard cigarette smoking as an
19 addiction. The data is biased and not fully
20 explained. We suggest a rigorous internal,
21 followed by an external research program, to
22 clarify these problems."

23 Did I read that correctly?

24 A. You read it correctly.

25 Q. Now, you don't debate that's what

1 Dr. DeNoble wrote, right?
2 A. I do not.
3 Q. In fact, with the first document, it
4 wasn't just DeNoble but it was actually four
5 authors, right?
6 A. And that's extremely unusual on the face
7 of it, that Dr. DeNoble and his boss and his boss'
8 boss would write a document like that.
9 Q. DeNoble, Dunn, Osdene, Ryan, right?
10 A. Correct.
11 Q. You think DeNoble was pressured into
12 saying that, right?
13 A. It resulted in his being put up for a
14 promotion on the basis of the services that he
15 rendered in 1983.
16 Q. Let me make sure I understand. Vic
17 DeNoble who was willing to do the boss' business
18 for promotion?
19 A. It is an issue of being asked to provide
20 information that could be used to refute the
21 hypothesis, and in talking to Vic I feel that he
22 was -- he succumbed to the pressure, yes.
23 Q. Is it your view that Vic DeNoble lied
24 when he wrote those three documents?
25 A. I can't get in someone's mind to know

1 whether they lied. Certainly what's in those
2 documents was not the prevalent -- the first one
3 that you showed us was done by four people.

4 Q. Right.

5 A. Dr. Osdene told me that his job was to
6 maintain controversy. Dr. DeNoble told me that he
7 was asked to provide that information. Dr. Dunn
8 told me that he was asked to provide such
9 information that they could use.

10 If you notice, the last one you read, it
11 was a critique of the literature, much as I
12 described as Dr. Osdene telling me, "Look,
13 whenever we see one of these articles, we will put
14 together the best story we can to counter-refute
15 the article."

16 There is no real evidence in there. I'm
17 not saying whether it's a lie. I'm not saying it
18 is a lie. I'm saying that's not something that
19 the people in the R&D center concluded that
20 nicotine wasn't addictive based on what's in those
21 memos that you just read.

22 Q. I want to talk about DeNoble. You told
23 the jury about the DeNoble's lab closing. So we
24 can talk about those other issues, too. Here is
25 what I heard you say. Tell me if I heard you

1 incorrectly: DeNoble didn't believe what he
2 wrote?

3 A. Not only didn't DeNoble believe it, the
4 company knew that it was false, we showed an
5 article up there where attorneys wrote something
6 saying, "Look, this is what this means," and
7 that's what we all knew, as we sat in
8 Dr. Hausermann's office and had this meeting, this
9 is what it meant. It meant that the studies that
10 Dr. DeNoble was doing were indicative of a problem
11 with nicotine, and we did not want to have any of
12 that work going on inside the research center.

13 Q. So what you're telling the jury is that
14 DeNoble didn't mean what he wrote, right?

15 A. That's correct.

16 Q. He was up for a promotion, so he wrote
17 it?

18 A. The promotion was offered in 1983, I
19 believe.

20 Q. And one of the memos was dated '83?

21 A. Correct.

22 Q. He didn't believe it. He was up for
23 promotion. He just said it, right?

24 A. He said he -- he was asked to come up
25 with ideas. It's the way I understand it now.

1 You have to ask the people who were involved. The
2 way I understand it, having been there, is that he
3 was asked to come up with reasons why one could
4 refute the hypothesis. And that's what he is
5 doing. He is following -- somebody asked him,
6 "Can I come up with reasons why this doesn't
7 work?"

8 Q. These are three different memos three
9 years apart. The first one's July 23rd, 1980,
10 four authors?

11 A. Correct.

12 Q. This is a conspiracy by all four of them?

13 A. Not conspiracy, no. I didn't say it was
14 a conspiracy. That's your word.

15 Q. Well, the impression I got is that you
16 said these people didn't believe what they said.

17 A. Dr. Osdene was trying to maintain
18 controversy.

19 Q. And the other three just went along?

20 A. They worked for Dr. Osdene.

21 Q. So let me ask you this: Scientific
22 integrity. Is it scientific integrity to write
23 something you don't believe?

24 A. No.

25 Q. Was Vic DeNoble a person of integrity?

1 A. In the basis of writing that, generally
2 speaking, I really don't know how you define it.
3 Q. Well, you have defined whether people
4 have integrity in the past, haven't you?
5 A. Yeah.
6 Q. So let's do DeNoble. If he didn't
7 believe what he said, if he was just going along
8 with his boss because he wanted a promotion, is he
9 a person of scientific integrity?
10 A. Not when it comes to that particular
11 piece of paper.
12 Q. And, of course, it is not just this
13 piece. Here is the one, 1983, three years later.
14 That was the time of the promotion, right?
15 A. Yes.
16 Q. Now, you are aware, are you not, that
17 Dr. DeNoble testified under oath in 1988 that he
18 meant what he said?
19 A. I am.
20 Q. Are you aware that he testified within
21 the last two months that he meant what he said?
22 A. No, I'm not.
23 Q. Who's in a better position to know
24 whether he meant what he said, you or Dr. DeNoble?
25 A. I would have to say Dr. DeNoble.

1 THE COURT: Excuse me just a moment.

2 Counsel, would you approach a minute?

3 (Discussion at the bench

4 off the record.)

5 THE COURT: Thank you.

6 BY MR. COFER:

7 Q. Nicotine analogs. All right. Here is

8 what I understand about nicotine analogs.

9 Nicotine has at least a couple of broad categories

10 of effect. Stay with me, because I know this

11 isn't that scientific. It has CNS, or brain

12 effects?

13 A. Right.

14 Q. The thinking is that's the reason people

15 like to smoke, they get a pleasurable feeling in

16 the brain, right?

17 A. Correct.

18 Q. But, it may have adverse heart or

19 cardiovascular effects, right?

20 A. Those may be adverse, but they are called

21 peripheral nervous system effects, and people may,

22 in fact, like that, too. That's the hard part.

23 Q. So you have got CNS, central nervous

24 system effects in the brain, right?

25 A. Correct.

1 Q. You have peripheral nervous system
2 effects in the heart?

3 A. Correct. The brain is -- more like
4 relaxes. The peripheral effects are more like
5 stimulation.

6 Q. And causing your heart to beat faster?

7 A. Causes your heart to beat faster. Causes
8 your veins to dilate a little bit.

9 Q. Causes your blood pressure to go up at
10 least temporarily, right?

11 A. Right.

12 Q. Now, the question was, and I guess to
13 some extent is, do those PNS, those peripheral
14 nerve system effects, do they cause long-term
15 adverse cardiovascular damage, right? Your answer
16 would be they do; that was the issue, right?

17 A. The issue, yes. You answered both
18 questions.

19 Q. So here --

20 MR. GAYLORD: I object to Counsel
21 answering the questions he has asked.

22 THE COURT: That's a fair objection.

23 MR. COFER: All right. I will let you
24 answer the question. They go so much faster if
25 I do.

1 BY MR. COFER:

2 Q. The idea behind the analog program was
3 let's see if we can find something that has the
4 good CNS effects without the bad PNS effects,
5 right?

6 A. Correct.

7 Q. So that was the goal. Before you start
8 yanking nicotine out of tobacco, you want to make
9 sure that you are getting a benefit from doing
10 that, right?

11 A. Well, no, if you yanked nicotine out of
12 tobacco, there would be a benefit from doing that,
13 but you want to continue to be able to sell the
14 product and yank the nicotine out of the tobacco.

15 Q. That's fair enough. But the point of the
16 research was you want something that gives you the
17 brain effects without the heart effects?

18 A. Correct.

19 Q. That's what this whole nicotine analog
20 program was about, right?

21 A. That's correct.

22 Q. And there were a bunch of people working
23 on it, weren't there?

24 A. Yes.

25 Q. You had guys like Jeff Seeman, who is a

1 Ph.D., organic chemist, worked for you who
2 actually came up with the analogs, right?
3 A. That's correct. If you check, I have a
4 couple of co-publications with Dr. Seeman.
5 Q. I have. I noticed that. He is an
6 organic chemist; you agree he is a smart guy?
7 A. Very smart, yes.
8 Q. He tinkered with stuff and came up with
9 these analogs, right?
10 A. That's correct.
11 Q. And then you sent them to some outside
12 researchers who looked at them?
13 A. Correct.
14 Q. And then you had Vic DeNoble doing some
15 stuff with them too, right?
16 A. Correct.
17 Q. But the goal was, I want to develop
18 something that is going to give me the brain
19 effects but not the heart effects, right?
20 A. Correct.
21 Q. Now, it was a little more complicated
22 than that, too, because even if you got the brain
23 effects and no heart effects, you had to take the
24 nicotine out, right?
25 A. No. Why?

1 Q. Well, the product. What you want to do
2 ultimately is you want to take a cigarette and you
3 want to yank the nicotine out and you want to slap
4 the analog in, right?

5 A. Not necessarily. You could actually put
6 it in with the nicotine.

7 Q. But you want to at least reduce the
8 nicotine enough that the nicotine isn't causing
9 the heart issues, right?

10 A. Yes.

11 Q. I'm sorry, I interrupted. I apologize.

12 A. What you might do then is to reduce the
13 amount of nicotine to a very low level, you might
14 even call it a denicotinized cigarette, for
15 example. It would be very tiny, but you have
16 added something else to it which reinforces what
17 little nicotine is there. So you have, still, in
18 effect, nicotine is still there, but reduced it
19 down to where you don't get the PNS, peripheral
20 nervous system effects, but we add something else
21 that gives the CNS.

22 Q. It is even more complicated than I
23 thought. It is not a matter of this or that. It
24 is a matter of maybe some of this and some of
25 that, but getting to the point where you get the

1 brain effects but not the heart effects; is that
2 right?

3 A. That's correct.

4 Q. Now, nicotine does something other than
5 just give you CNS brain effects, right?

6 A. That's correct.

7 Q. Nicotine has a taste, right?

8 A. It is an ugly taste, but, yes, it has a
9 taste.

10 Q. Well, it is described, I think, as impact
11 or sensation or throat grab, right?

12 A. It is not clear that's due to nicotine
13 alone.

14 Q. Well, don't smokers describe nicotine and
15 hasn't research shown that nicotine gives you a
16 fullness in the mouth and a feeling and experience
17 of fullness in the mouth and back of the throat?

18 A. Yes, but most of the organic bases will
19 do the same thing.

20 Q. In any event, if you take the nicotine
21 out or substantially reduce it, and you are going
22 to put something in in its place, you need to make
23 sure that it is going to do more than just have
24 brain effects. It is going to satisfy whatever
25 those subjectives are, that feeling, that

1 acceptability, that throat grab or throat scratch
2 that nicotine does, right?

3 A. But you can put things in, it's very well
4 known, to raise the pH a little bit. Put in
5 ammonia, for example, gives you a throat grab.
6 There are things that you can do that will emulate
7 the throat grab. Because that's not specific to
8 nicotine. Any organic base will do the same
9 thing.

10 Q. Okay. So you might -- you can find ways
11 to work around it. But it wasn't just as simple
12 as taking the nicotine out and putting the analog
13 in, right?

14 A. That's right.

15 Q. Now, the time period -- this was what,
16 '83 or so?

17 A. Well, the program actually started under
18 Dr. Osdene, so I think it started in the late
19 '70s.

20 Q. Did you have the ability by '83 to take
21 the nicotine out?

22 A. Yes.

23 Q. How did you do that?

24 A. Well, if you go back to the 1950s with
25 Sano and King Sano cigarettes, you can extract

1 nicotine.

2 Q. At Philip Morris what techniques did you
3 use?

4 A. If I recall correctly, we were producing
5 denicotinized cigarettes in the late '70s using
6 extraction. You can use water. You can use
7 trichloroethylene. You can use methylene
8 chloride. Or you can use several solvents.
9 Solvents can be used to extract, like they extract
10 coffee, the same ones are being used for
11 extraction of caffeine.

12 Q. Fluid extractions, dialysis techniques,
13 and preparative liquid chromatography. Those
14 techniques?

15 A. Well, there is extraction. It's talking
16 there about extraction -- I don't know what memo
17 you have. But basically the technology to remove
18 nicotine from cigarettes was known to the industry
19 and to Philip Morris from the mid-'50s.
20 Commercial products were made and sold with no
21 nicotine.

22 Q. Let me read this to you. "Extraction
23 technology: We are making some beginnings in this
24 area with critical fluid extractions, dialysis
25 techniques, and preparative liquid chromatography.

1 We have also obtained good consultants in the
2 area. We will need more internal manpower as we
3 identify specific techniques and flavorants."

4 Was that talking about nicotine
5 extraction?

6 A. I don't know. I need to see the memo.

7 MR. COFER: May I approach, Your Honor?

8 THE COURT: The witness?

9 MR. COFER: Yes.

10 THE COURT: Sure.

11 BY MR. COFER:

12 Q. Let me show a memo, "W.A. Farone. Max
13 Hausermann, Wally McDowell, March 28, 1983,
14 Subject: Long-term directions technology."

15 You are W.A. Farone, right?

16 A. Right.

17 Q. Let me show you what I was referring to.
18 Tell me whether you were talking about nicotine
19 extraction technology, please.

20 A. Well, not really. What we're trying to
21 do is to remove the tobacco-specific nitrosamine.

22 Q. Was nicotine involved in that?

23 A. Well, yeah. The way it works, you remove
24 the tobacco-specific nitrosamines and all the
25 alkaloids.

1 Q. Right.

2 A. And then you separate them and you put
3 the nicotine back. So you have taken the bad guys
4 out and put back the nicotine. This isn't
5 directed at nicotine removal.

6 Q. But you have to remove the alkaloids
7 nicotine with that, right?

8 A. The nicotine comes out with it when you
9 do it, yes.

10 Q. Let me hand that back, please.

11 So what did you mean when you said, "We
12 are making some beginnings in this area with
13 critical fluid extractions, dialysis techniques,
14 preparative liquid chromatography. We are making
15 some beginnings. We have obtained good
16 consultants. We will need more internal manpower
17 as we identify specific techniques and
18 flavorants."

19 A. We had hired a Ph.D. chemical engineer
20 named Dr. Jenny Patrick.

21 Q. Jenny Patrick?

22 A. Jenny -- her specialty was supercritical
23 fluid extraction. Originally, she was hired by
24 the process development people, but she ended up
25 working with people working for me. And the

1 objective of that exercise was to be able to
2 extract whatever we wanted to out of tobacco.

3 Specifically, it was the tobacco-specific
4 nitrosamines with the nicotine, and then you would
5 treat that to recover the nicotine and put the
6 nicotine back. So you could take out nitrate,
7 tobacco-specific nitrosamines. And we were in the
8 process of trying to get approved a budget to --
9 we had finished the list on things that were
10 stopped. This was one of them.

11 Q. Right.

12 A. We were trying to get approved budget
13 that would allow that, to build a pilot plant to
14 do all that.

15 Q. That was going to remove all alkaloids,
16 all nicotine, and the hope was tobacco-specific
17 nitrosamines, right?

18 A. Yes. And it turned out that it really
19 wasn't a hope. It actually was done.

20 Q. Now, you mentioned Next -- or you
21 mentioned denicotinized cigarettes, which made me
22 think of Next.

23 A. Actually, this was the precursor to Next.
24 The technology we discussed was the precursor to
25 Next.

1 Q. Next was a product, a denicotinized
2 cigarette, that Philip Morris actually brought to
3 market; is that right?

4 A. That's correct.

5 Q. What they did was they used, in fact, the
6 same technique you use to remove caffeine from
7 coffee, right?

8 A. Well, yes.

9 Q. Cliff Lilly, you know Dr. Lilly?

10 A. I know Dr. Lilly well.

11 Q. Wasn't Cliff Lilly in charge of the
12 project?

13 A. I don't know that detail, but I'm saying
14 the genesis of that goes back to '82, '83.

15 Q. And, in fact, Lilly took a bunch of
16 people over to Germany and they partnered with a
17 company that took caffeine out of coffee and came
18 up with this neat way to take nicotine out of
19 tobacco, right?

20 A. It is one way to take nicotine out of
21 tobacco.

22 Q. Was that supercritical extraction?

23 A. Exactly. That's what that memo was
24 talking about.

25 Q. That's what your memo was going to.

1 I want to show you a memo from Melissa
2 Jeltema to Dr. Peter Martin. Are you familiar
3 with either of those?

4 A. Both of them.

5 Q. June 10, 1986. Who was Melissa Jeltema?

6 A. Melissa was a -- her husband worked for
7 us, too -- Melissa was a food scientist, Ph.D.
8 food science. Dr. Peter Martin worked in
9 Dr. Lilly's group. He is a Ph.D. nuclear
10 physicist actually, but he was working on chemical
11 problems for us.

12 Q. He is a Ph.D. nuclear physicist?

13 A. Originally.

14 Q. "Subject: Testing of denicotinized
15 cigarettes." I'm going to read you the second
16 paragraph. I want to set it up this way.

17 You told the jury without nicotine,
18 people don't smoke, right?

19 A. That's correct.

20 Q. You had, was it King Sano? Was that the
21 name of it, back in the '50s?

22 A. We had Sano and King Sano, S-A-N-O,
23 cigarettes in the '50s, then we had the Next
24 product in the early '90s.

25 Q. Now, apparently the people at

1 Philip Morris had trouble getting that through
2 their heads, didn't they?

3 A. Oh, I don't think so.

4 Q. Well, let's read it then.

5 Paragraph 2, Melissa Jeltrema to Dr. Peter
6 Martin June 10, 1986: "There are generally two
7 opposing views concerning the importance of
8 nicotine in cigarettes. The first is that
9 nicotine is the primary reason that people smoke
10 and that without a certain level of nicotine
11 smokers will quit. The other is that people smoke
12 primarily out of habit and for the taste and a
13 removal nicotine will have no large effect on this
14 habit, assuming no large change in cigarette
15 taste. The truth may, of course, lie somewhere
16 between those two opposing views."

17 Did I read that correctly?

18 A. Yes.

19 Q. Now, Philip Morris did, in fact, bring a
20 cigarette to the market called Next, right?

21 A. They did.

22 Q. It was a denicotinized cigarette, right?

23 A. Not only was it denicotinized, it had no
24 tobacco-specific nitrosamines.

25 Q. In fact, it was a miserable failure,

1 right?
2 A. And probably one of the safest cigarettes
3 ever marketed.
4 Q. Nobody bought it?
5 A. Nobody knew it was safe.
6 Q. It was very safe, because no one would
7 smoke it?
8 A. But nobody knew it was safe.
9 Q. Do you know how much money Philip Morris
10 spent in bringing Next to market?
11 A. \$300 million.
12 Q. A bunch of money, isn't it?
13 A. Not much at all.
14 THE COURT: Mr. Cofer, break point.
15 MR. COFER: This would be fine.
16 THE COURT: Jurors, 15 minutes, please.
17 Don't discuss the case.
18 Watch your step. Thank you.
19
20 (Open court; jury not
21 present:)
22
23 THE COURT: Now can you give me a better
24 time estimate?
25 MR. COFER: I'm getting there. Probably

1 within an hour.
2 THE COURT: So you better get a new
3 flight, Mr. Cofer.
4 MR. COFER: I have one. I missed that
5 flight.
6 THE COURT: You think you will be
7 finished by 4:00?
8 MR. COFER: I will try to finish sooner,
9 if I can.
10 THE COURT: 4:00, 4:15.
11 How much redirect do you think,
12 Mr. Gaylord? Do you think.
13 MR. GAYLORD: 25 minutes.
14 THE COURT: You may want to alert your
15 team that we may not get to matters outside the
16 presence of the jury.
17 MR. GAYLORD: I was distracted. What was
18 said about how long?
19 THE COURT: He says probably another
20 hour. I said four o'clock. Mr. Dumas says no,
21 an hour after we take up, to protect Mr. Cofer,
22 because he can't speak for himself, you are
23 telling me 45 minutes. That's getting us
24 awfully close to 5:00.
25 If your colleagues are going to rush down

1 at 4:15 to do something and we are still with
2 witnesses, you may want to give them a heads-up
3 on that.

4 MR. GAYLORD: We will call them.

5
6 (Recess)

7
8 (Open court; jury not
9 present:)

10
11 THE COURT: Ready?

12 MR. COFER: Yes.

13 THE COURT: Bring them in, please.

14
15 (Open court; jury
16 present:)

17
18 THE COURT: All set, jurors? Okay.
19 Go ahead.

20
21
22
23
24
25

CROSS-EXAMINATION

(Resumed)

BY MR. COFER:

Q. We are about there.

A. Ammonia. Lots of talk about ammonia. Is ammonia the secret to Marlboro success?

A. Some people at Philip Morris thought it was.

Q. Is it?

A. I don't think there is any one item that is the secret to Marlboro success. But there is -- in the hierarchy of things, it probably contributes.

Q. You said I think on direct examination that it was around 1980 where you guys were testing Reynolds cigarettes and saw that there was a bunch of ammonia in Winston.

A. We saw a change. We had been testing them before and we saw a change in the amount of ammonia.

Q. If ammonia is the answer, why doesn't everyone just put ammonia in all the products?

A. There was a move I think between '70 and '80, a lot of products did end up with a lot of additional ammonia.

1 Q. Did it make a big difference in brand
2 preference?

3 A. I think. For example, Camel and some of
4 the other ones, let's call it turned around,
5 brands that were previously declining may have
6 shown increased market share, but you can't put
7 that on any one single component.

8 Q. Does Philip Morris use ammonia technology
9 in its other brands, brands other than Marlboro?

10 A. Well, ammonia technology. The use of --
11 wherever they used -- this is a real complicated
12 question.

13 Wherever they use RL, reconstituted leaf,
14 or BL, they would, in fact, be using diammonium
15 phosphate, urea. You would have to look to the
16 level they used it, you would have to look at the
17 inclusion of that material. But like, for
18 example, the BL, the blended leaf had the higher
19 percentage, at least as I recall, of the
20 diammonium phosphate, as I recall, that was used
21 almost specifically in Marlboro because there
22 wasn't enough to use in other products.

23 Q. Let's talk about this whole ammonia
24 thing. And I don't want to spend a lot of time on
25 it, but there has been a lot of testimony and talk

1 about it.

2 As I understand it, there is ammonia
3 compounds, ammonia compounds are naturally present
4 in tobacco; is that right?

5 A. That is correct.

6 Q. As you burn tobacco, more ammonia
7 compounds are produced; is that right?

8 A. Well, not quite. You have -- you
9 conserve the amount of nitrogen you have. So
10 let's say there is nitrogen compounds. A certain
11 amount of that nitrogen will end up in ammonia.

12 Q. The way ammonia is added in the
13 manufacturing process is it's in recon,
14 reconstituted tobacco, right?

15 A. No. That's not the only way, no.

16 Q. Let's go through those.

17 Blended leaf is part of recon, correct?

18 A. Correct.

19 Q. What they did is they used ammonia
20 compounds to release the pectin?

21 A. Diammonium phosphate, if that's what you
22 are referring to, has the ability to release
23 pectins, the phosphate part, not the ammonia part.

24 Q. Pectin, isn't that like gum, the natural
25 gum, the stuff in grapes and water that make the

1 jam stick together?
2 A. Yes.
3 Q. It releases the pectin in the blended
4 leaf process to allow the stuff to stick together?
5 A. That doesn't allow the urea --
6 Q. Let's stick with this. Ammonia, I have
7 been told that ammonia compounds do impart flavor;
8 is that right?
9 A. That's correct.
10 Q. I have been told an example is it is a
11 difference between a piece of white bread and when
12 you toast that white bread. That's how the flavor
13 has been described, like a toast flavor.
14 A. Weak analogy, but it is okay.
15 Q. Okay. So ammonia used in the recon
16 process and, as I understand it, with respect to
17 the RL, small amounts were used for flavor,
18 consistent --
19 A. Small amounts of what?
20 Q. -- ammonia compounds.
21 A. For flavor?
22 Q. Right.
23 A. Urea is a flavor?
24 Q. Ammonia compounds impart flavor?
25 A. No -- urea I'm asking. To me, urea isn't

1 a flavor. It is a constituent of urine, as you
2 know. It is not directly delivered into the
3 smoke, as far as I know.

4 Q. But it is true that ammonia compound is
5 part of flavor like the toast's flavor of bread to
6 bread?

7 A. Yes. Ammonia compounds, yes.

8 Q. Now, ammonia does occur naturally in
9 other products, right?

10 A. Ammonia compounds occur, right.

11 Q. Twinkies, bread, beer, other consumer
12 products, right?

13 A. Yes, but we don't inhale those.

14 Q. That's right. The distinction you made
15 yesterday was the difference in the route of
16 administration, right?

17 A. Correct.

18 Q. The difference between eating something
19 that goes in the stomach or inhaling something
20 that goes in the lungs?

21 A. Correct.

22 Q. Now, it is true, isn't it, that there is
23 no secret that Marlboro or Philip Morris uses
24 ammonia compound in their products?

25 A. Especially in the late '70s, after

1 everybody tried to retroengineer the Philip Morris
2 products, yes.

3 Q. Are there any patents on that?

4 A. There are patents relating to the use of
5 ammonia for various things, yes.

6 Q. Philip Morris patents in the public
7 literature, right?

8 A. Yes.

9 Q. Saying, "We use ammonia, here is how we
10 use it -- here is how we use it," right?

11 A. That's correct.

12 Q. Now, you talked about ammonia compounds
13 affect on smoke pH, right, not whether or not
14 smoke pH, but on the pH of the environment that
15 affected the distribution of bound to free
16 nicotine, right?

17 A. I talked about -- go back through it. I
18 talked about moistening tobacco which contained
19 nicotine and then putting ammonia specifically
20 that was made from something from which you burn
21 into that piece of tobacco and then releasing it.

22 Q. In my simple nonscientific way, let me
23 see if I can describe this.

24 You have nicotine, it is bound nicotine.
25 It is bound to a hydrogen ion, right?

1 A. That's one kind of bound.

2 Q. Called protonated?

3 A. Yes, called protonated. There is another
4 kind that -- another compound in the matrix of the
5 tobacco.

6 Q. The thinking is if you elevate the pH of
7 the surrounding material, the filler in the
8 tobacco, the smoke, or whatever, you can cause
9 some of the nicotine to go from that bound to
10 unbound or free nicotine, right?

11 A. Correct.

12 Q. And then the issue is what does that do,
13 right?

14 A. Correct.

15 Q. Now, it is true, isn't it, that the
16 National Cancer Institute, for example, working
17 with the tobacco working group recommended in the
18 '70s that the companies consider getting more free
19 nicotine in their smoke, right?

20 A. For the same reason that they recommended
21 increasing the nicotine to tar ratio.

22 Q. Exactly. Because the thing was, if
23 people thought it was the tar that caused the
24 problem, but people smoke for the nicotine, you
25 want to find a way that the smoker can get the

1 satisfaction he or she wants without compensating
2 for the tar, right?
3 A. That's correct.
4 Q. So the thinking was, and I think you may
5 have even recommended this, correct me if you
6 didn't, but the thinking was if you -- and the
7 problem, of course, is nicotine follows tar,
8 right? When you reduce tar, you reduce nicotine?
9 A. Unless you do something, yes.
10 Q. Unless you do something. So the thinking
11 was, okay, we are bringing this tar down because
12 we think the tar is bad, right?
13 A. Correct.
14 Q. The problem is, we are bringing this
15 nicotine down, and if you bring the nicotine down
16 too low, then smokers may compensate for that,
17 right?
18 A. Correct.
19 Q. So they alter their smoking behavior,
20 right?
21 A. Correct.
22 Q. They smoke more cigarettes, right?
23 A. That's one alteration.
24 Q. Or they take puffs more frequently,
25 right?

1 A. That's correct.
2 Q. Smoke the cigarette down closer to the
3 filter, right?
4 A. That's correct.
5 Q. But the net effect is, and the concern
6 is, they are getting more tar because they are
7 altering their smoking behavior, right?
8 A. Correct.
9 Q. So one way to fix that is you give them
10 the nicotine that they want and keep the tar down,
11 right?
12 A. That's correct.
13 Q. And the thinking was maybe the free
14 nicotine will do that, has more of an impact, has
15 more of a sensation, has more a throat grab,
16 whatever, gives them the satisfaction that they
17 want, right?
18 A. That's correct. Except I'm totally
19 confused now.
20 Q. I have that effect on people.
21 INBIFO. We talked about INBIFO. You
22 heard about INBIFO when you worked at Lever
23 Brothers, right?
24 A. Right.
25 Q. You were aware that INBIFO was a testing

- 1 laboratory in Germany, correct?
- 2 A. That's correct.
- 3 Q. Companies other than Philip Morris used
- 4 to contract with INBIFO to do inhalation work,
- 5 right?
- 6 A. Right.
- 7 Q. Among other things?
- 8 A. Among other things. They did a wide
- 9 variety of biological testing.
- 10 Q. Inhalation tests can be difficult to
- 11 perform, right?
- 12 A. Inhalation tests are difficult to
- 13 perform.
- 14 Q. You need specialized equipment?
- 15 A. Correct.
- 16 Q. You need trained personnel?
- 17 A. Yes.
- 18 Q. There are a few -- I will say a few.
- 19 There are a limited number of laboratories in this
- 20 country that have the resources, the expertise,
- 21 the equipment, the personnel to do inhalation
- 22 testing; is that right?
- 23 A. There are a few that specialize in it,
- 24 yes.
- 25 Q. Now, the problem with that is that there

1 are lots of companies that want inhalation work
2 done, right?

3 A. Right.

4 Q. You have a few number of labs doing it,
5 you have got a bunch of people competing for the
6 resources, that limits your ability to do it,
7 right?

8 A. No. I mean, take my Lever Brothers
9 experience, you build your own lab to do it.

10 Q. Your answer would be that Philip Morris
11 should bring all that inhalation in-house?

12 A. Not only should you bring it in-house,
13 then you should have that in-house testing
14 confirmed occasionally by duplicating it outside
15 to make sure you are not biased in your results.

16 Q. Now, the fact is, Philip Morris did bring
17 it in-house because they bought INBIFO, right?

18 A. Yes.

19 Q. And the fact is, Philip Morris did
20 contract with outside labs in this country to do
21 it, too, right?

22 A. Did they contract directly?

23 Q. Hazelton?

24 A. I think that was before my time.

25 Q. Before your time. All right.

1 A. Yes.

2 Q. Now, one thing that was said yesterday
3 was, the thinking was if you do this work over in
4 Germany in INBIFO, then you don't have to tell
5 juries about it in the United States. If you
6 didn't say that, at least that's what I took from
7 your testimony. Is that a fair characterization?

8 A. That's a characterization what Dr. Osdene
9 told me, yes, and other people.

10 Q. Osdene said, "If we do this with work
11 over in Germany, no one finds out about it,"
12 right?

13 A. That's correct.

14 Q. You are not a lawyer, are you?

15 A. No.

16 Q. You are not telling the jury that just
17 because Philip Morris does work in Germany means
18 they don't have to make that work available in the
19 United States, are you?

20 A. No.

21 Q. Were you aware of the fact that over
22 840,000 pages of INBIFO documents are sitting in a
23 warehouse in Minnesota that are available to these
24 plaintiffs? They are available to any plaintiffs
25 and, in fact, the vast majority of them are on the

1 internet. Did you know that?

2 A. Yeah, I know that. Yes.

3 Q. So you know the INBIFO documents are
4 available, right?

5 A. I know there are INBIFO documents
6 available. I haven't found any INBIFO documents
7 that I was told existed about the whole product
8 testing.

9 Q. You have no information -- let's start
10 with at INBIFO, INBIFO itself.

11 A. Okay.

12 Q. Then we will talk about Richmond and
13 Dr. Osdene.

14 Isn't it true, Dr. Farone, you have no
15 information that the people at INBIFO destroyed a
16 single document, right?

17 A. That's correct.

18 Q. What you know is that Dr. Osdene said,
19 "I'm going to ship this stuff back," or "I'm going
20 to destroy it," or "I'm going to put it in my
21 safe," right?

22 A. Well, I don't say he was going to put it
23 in the safe. He was using the safe as a temporary
24 repository before he destroyed it.

25 Q. There are documents that would suggest

1 that Dr. Osdene did, in fact, destroy documents he
2 got from INBIFO, right?

3 A. Correct.

4 Q. He didn't share them with you the way you
5 think he should; is that right?

6 A. That's correct.

7 Q. That's something different than saying
8 those documents don't exist at INBIFO, or the
9 people at INBIFO destroyed evidence, right?

10 A. That's correct.

11 Q. Now, in fact, the documents that
12 plaintiffs have that say Osdene says "destroy
13 documents" were produced in litigation, right?

14 A. I don't know which ones you are referring
15 to specifically.

16 Q. But the documents that plaintiffs are
17 going to show the jury that says the bad things
18 about, you know, destroy, fax to Cologne, those
19 are Philip Morris documents given to the
20 plaintiffs, right?

21 A. I see what you're saying, yes.

22 Q. One last thing. When you were at Lever
23 Brothers, did you guys do EEG brainwave testing
24 for toothpaste brand preference?

25 A. No. I think it was used for flavor

1 testing, not toothpaste, but it was done at St.
2 Denie, outside of France -- in France, outside of
3 Paris. UniLever did it. I'm trying to remember
4 which product it was used on. I don't remember
5 right now.

6 Q. Two points on that. Point one, at Lever
7 Brothers they did EEG brainwave testing to try to
8 objectify taste preferences of flavors; is that
9 right?

10 A. I don't remember if it was flavors or
11 fragrances.

12 Q. Either flavors or fragrances, Lever
13 Brothers did EEG brainwave testing to try to
14 objectify reactions to flavors or fragrances?

15 A. That's right.

16 Q. What we mean by "objectify" is if you ask
17 somebody, "Did do you like this cigarette, how did
18 it taste? Well, it tastes good, it tastes bad, or
19 harsh, or cool," those are subjective reactions,
20 right?

21 A. That's right.

22 Q. Those are descriptors, correct?

23 A. Correct.

24 Q. The idea behind this brainwave testing is
25 to see whether you can objectively determine how

1 the brain's responding to the flavor or the
2 fragrance or whatever, right?

3 A. Or to the pharmacological effects.

4 Q. And you are not suggesting that's an
5 inappropriate analytical method, are you?

6 A. No.

7 Q. The other thing, you say that work was
8 done in France?

9 A. St. Denie.

10 Q. Okay. This morning when we were talking
11 about safer cigarettes, the way you make those
12 with tobacco or without tobacco, you mentioned
13 that in the 1970s Philip Morris began working on
14 projects where the idea was to do some of the
15 things that you described, right?

16 Was that way too bad of a question?

17 A. I'm trying to remember whether I listed
18 it to 1970s. I'm not sure of the timeframe. They
19 did lots of research on making changes in the
20 product that would result in lower tar or lower
21 nicotine.

22 Q. Right. Let's talk about unconventional
23 cigarettes.

24 A. Okay.

25 Q. By that what I mean is cigarettes that

1 don't burn tobacco but heat tobacco.
2 A. That question, yes.
3 Q. Because we talked about the importance of
4 if you could control the temperature of the
5 burning coal, you could control some of the stuff
6 that is coming out of the mouth end of the
7 cigarette, right?
8 A. Correct. If you don't burn it at all,
9 you have even better control.
10 Q. Right. You are familiar with a project
11 called Delta, right?
12 A. I am.
13 Q. The idea was to have a cigarette that
14 didn't produce some of those bad things that you
15 get when you pyrolyze or burn tobacco, correct?
16 A. Correct.
17 Q. In fact, you were involved with trying to
18 solve some of the chemical problems in that
19 project, right?
20 A. Correct.
21 Q. And that project was ongoing when you
22 left?
23 A. I think the name had been changed, but
24 essentially the same technology was being
25 developed.

1 Q. Delta, Beta to whatever?
2 A. Omega.
3 Q. One of the scientists working on the
4 project was a man that you described earlier,
5 Dr. Cliff Lilly, right?
6 A. Correct.
7 Q. You were pleased with Dr. Lilly's work?
8 A. Yes.
9 Q. He is a scientist for whom have you high
10 regard?
11 A. That's true.
12 Q. He is still a scientist at Philip Morris?
13 A. As far as I know.
14 Q. R.J. Reynolds, Philip Morris' competitor,
15 actually test marketed two of these unconventional
16 cigarettes, didn't they, Doctor?
17 A. Yes, they did.
18 Q. In 1987 they introduced Premiere, right?
19 A. Yes.
20 Q. That was the one that heated but did not
21 burn tobacco, correct?
22 A. Correct.
23 Q. It was described as being a cleaner
24 smoke, right?
25 A. I don't recall that, but that's okay.

1 Q. The public health community and the
2 anti-tobacco groups went nuts when that product
3 went out, right?

4 A. I don't know that I would characterize it
5 that way, but they were -- some of them were
6 disturbed by the product.

7 Q. Did they run and embrace it and say,
8 "This is a technologically-advanced product, this
9 reduces tar, this reduces a lot of the bad stuff;
10 let's jump on this bandwagon"? They didn't do
11 that, did they?

12 A. No, they did not.

13 Q. Now, the information that you have seen
14 on these unconventional cigarettes seems to
15 indicate a reduction of some of these bad things
16 that you have identified, these classes of
17 compounds, right?

18 A. Yes. There is even something
19 published -- surprise -- biological activity tests
20 on some of the products.

21 Q. Okay. Well, in fact, have you described
22 these sorts of cigarettes as getting close to your
23 ideal safe cigarette?

24 A. Yes. If we, in fact, derive our proof,
25 do the testing, and show that they are, in fact,

1 better than the conventional cigarettes as used by
2 the smoker.

3 Q. Let's turn to Defendant's Exhibit 914,
4 "Target compounds to remove." And first, let me
5 show you something, the Accord. Have you heard of
6 the Accord?

7 A. I have.

8 Q. This is Philip Morris' unconventional
9 cigarette, right, Doctor?

10 A. That's right.

11 Q. Being test marketed today?

12 A. Yes, I understand that.

13 Q. It heats but does not burn tobacco?

14 A. Correct.

15 Q. Have you ever seen it?

16 A. Yes.

17 MR. COFER: May I approach? I guess I'm
18 halfway there.

19 THE COURT: Hold on a second.
20 (Discussion at the bench
21 off the record.)

22 BY MR. COFER:

23 Q. Ready?

24 A. Ready.

25 Q. Let me hand you the Accord cigarette.

1 MR. COFER: May I show this to the jury?
2 THE COURT: Put it on the screen. If you
3 want to compare it to the other one in size for
4 dimensional sake, you can do that.
5 Have you got an exhibit?
6 BY MR. COFER:
7 Q. The Accord cigarette, you agree, looks
8 like a little cigarette, right?
9 A. That's correct.
10 Q. Do you want to tear it apart, look inside
11 it?
12 A. I don't think I will do it.
13 Q. I will do it on the screen.
14 It has tobacco in it, doesn't it?
15 A. Yes.
16 Q. It has a filter in it, doesn't it?
17 A. Yes.
18 Q. In fact, it has two filters, right? It
19 has this little pre-filter, and then it has what
20 looks like a more conventional filter, right?
21 A. Right.
22 Q. The way it works, and I will not light
23 it, but you take it and you put it in this little
24 lighter and you put it down and then it gives you
25 I think eight puffs. Does that sound right?

1 A. That's what a conventional cigarette
2 does.
3 Q. Tells you how much puffs. You can take a
4 puff off it --
5 A. Yes.
6 Q. -- put it in your pocket, and then the
7 next day you can take another puff, correct?
8 A. You could.
9 Q. And then you got eight puffs, you got
10 that cigarette, you puff it whenever you want,
11 right?
12 A. Correct.
13 Q. No side-stream smoke, correct?
14 A. I haven't really measured it. It is
15 going to be very miniscule, if there is any.
16 Q. Now, I want to ask you to assume -- turn
17 to your target compounds to remove. I want you to
18 assume that this has been tested. It reduces
19 tobacco-specific nitrosamines by 82 to 86 percent,
20 volatile nitrosamines by 90 percent, polycyclic
21 aromatic hydrocarbons by 91 to 99 percent, carbon
22 monoxide by 91 to 99 percent, nitrogen oxide by
23 more than 90 percent, also reduces some aldehydes.
24 A pretty good cigarette, right?
25 A. A step in the right direction.

1 Q. I also want you to assume the evidence
2 will be that no matter how diligent Philip Morris
3 was, they could not have brought this product to
4 market any sooner.

5 I want you to assume that they partnered
6 with companies like Sanyo to make battery
7 technology, little, small batteries that would
8 permit this lighter to do what I described,
9 computer chips that would detect puff counts.

10 I want you to assume that they had to
11 invent a metal in collaboration with the Oakridge
12 National Laboratories that was patented, that the
13 Department of Energy has expressed an interest in.

14 This is getting pretty close to your
15 ideal cigarette, isn't it?

16 A. It is getting better, yes.

17 Q. This cigarette is being test marketed
18 today, right?

19 A. That is correct.

20 Q. Just a couple more questions.

21 Until you were told that you were not
22 being promoted, you saw your future as being at
23 Philip Morris, correct, Doctor?

24 A. Maybe not for the entire duration of my
25 career, but yes, my immediate future I saw as

1 being at Philip Morris, yes.

2 Q. And you thought Philip Morris was a good
3 company; otherwise, you would not have wanted to
4 stay, correct, Doctor?

5 A. That is correct.

6 Q. As of the time that you left
7 Philip Morris, you thought that the company was
8 doing good things that would, you hoped, produce
9 benefits for the people who were smoking
10 Philip Morris cigarette products; is that a fair
11 statement?

12 A. That is correct.

13 MR. COFER: Thank you, Dr. Farone.

14 THE COURT: Mr. Gaylord.

15 MR. GAYLORD: Your Honor, I have several
16 matters that I think I need to discuss with the
17 Court.

18 THE COURT: Jurors, why don't you step
19 out to the jury room. Use it as a stretch break
20 while we take this up. We will have you back
21 shortly. Remember not to discuss the case,
22 please.

23

24 (Open court; jury not
25 present.)

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THE COURT: Mr. Gaylord.

MR. GAYLORD: Your Honor, I have five topics on which I believe the door has been opened to redirect examination. Some of them are exhibits, others are just subjects, and I just want to go through them as expeditiously as I can.

THE COURT: Yes, we appreciate the notice.

MR. GAYLORD: First one is the FDA. Counsel asked this witness why didn't the government test these products. I think that requires rebuttal, and it is an obvious invitation to talk about what the FDA and what other agencies do, one of which is not test products, but I think that has to be responded to.

Secondly, the witness has been asked about RJR's use of ammonia and his knowledge of the fact that their cigarettes increased in ammonia, and I think it is only fair for him to be allowed to explain why he knows now that RJR was, in fact, responding to the ammonia in Marlboro. That's Exhibit 88.

1 Next, a quote this morning just before
2 lunch, out of context from Plaintiff's Exhibit
3 163. Counsel told us it's from the mid-1950s.
4 It is, in fact, a memorandum to members of the
5 planning committee of Hill & Knowlton. The
6 quote we heard, "Boy, wouldn't it be wonderful
7 if our company was the first to produce a
8 cancer-free cigarette; what we would do to
9 competition." There is a whole lot more to that
10 document. I'm going to offer it again.

11 THE COURT: Tell me why it was excluded,
12 remind me.

13 MR. GAYLORD: Honestly, I'm not sure I
14 know. I asked -- Mr. Thomas and I had a
15 conversation about that.

16 THE COURT: We will get to it. Go ahead.

17 MR. DUMAS: What number was that?

18 THE COURT: 163.

19 MR. GAYLORD: 163. It is a document
20 which, I should add, is on the list of Hill &
21 Knowlton documents, Exhibit 99, which I think is
22 a Court exhibit. It was Exhibit No. 1 in the
23 deposition in this case of Dr. Pollay.

24 And that deposition, in fact,
25 authenticates -- I think authentication may have

1 been the question. It is authenticated in the
2 deposition testimony by a great deal of
3 reference, and quoting from it, which allows to
4 look at it and see that it is the same.

5 THE COURT: Give us the other two points
6 and we will take each of them up.

7 MR. GAYLORD: There are actually four. I
8 had Exhibit 88 down twice.

9 And, finally, other litigation. And I
10 think we need to go into it, not in great depth,
11 but a little ways into the existence of other
12 litigation to respond to the suggestion that all
13 these documents are stored somewhere at the
14 beneficence of the defendant, and because they
15 are a wonderful company and they are willing to
16 open their files to everybody, and the fact of
17 the matter is years of litigation have finally
18 resulted in a peep under the tent flap of these
19 documents, and the court orders and special
20 masters and referee proceedings and what have
21 you go behind the disclosure of all these
22 documents.

23 THE COURT: Let's start with that point
24 and work backwards.

25 I think it is fair, Mr. Cofer, to

1 conclude, based on your examination of the
2 witness, the jury might erroneously conclude
3 that plaintiffs have been given documents as
4 opposed to having obtained their production
5 through means of access to court rule.

6 Secondly, that since your question about
7 the INBIFO documents not being tied to a
8 particular period of time, the jury might have
9 the impression that they have always been in
10 Minnesota in a warehouse somewhere. So at least
11 in that regard, it is my preliminary conclusion
12 that you have opened the door to Mr. Gaylord
13 having an opportunity to explain to the jury
14 that the Minnesota warehouse has only existed
15 for a recent period of time and that the
16 documents there were not given to the
17 plaintiffs; they were ordered produced by the
18 Court and are now available on the internet
19 because of action taken thereafter.

20 MR. COFER: I don't have a problem with
21 that. It is a matter of degree.

22 Just so the record is clear, this was in
23 response to his testimony on direct examination
24 where he was shown documents saying, do the work
25 at INBIFO because you don't have to produce it

1 in lawsuits.

2 THE COURT: You are the lawyers. You are
3 being advocates. All I'm saying, I think it is
4 fair to allow Mr. Gaylord to put a timeframe on
5 the availability of the documents from Minnesota
6 and to, within limits, make clear, at least from
7 the plaintiff's perspective, that nothing has
8 been, quote, given to them, which was your word,
9 about these documents being given to the
10 plaintiffs.

11 That suggests that some one, maybe in an
12 advocate's word, benevolently gave them. My
13 experience in this case has been every document
14 has been the subject of a particular analysis
15 and an objection, and I'm not suggesting that it
16 is not appropriate to make those objections.
17 I'm simply saying you have opened the door to an
18 explanation alternative to a benevolent giving.

19 MR. COFER: I agree with that.

20 THE COURT: Mr. Gaylord, you may proceed
21 on that ground.

22 And then if you think he is going too
23 far, I will deal with an objection-by-objection
24 basis in the jury's presence.

25 Let's go to 163. Someone tell me, I see

1 Mr. Randles is here and Mr. Dumas. Maybe
2 someone quickly recite for the record where we
3 started with that exhibit and what we were --
4 where we left off with it.

5 MR. COFER: Can I -- before we start on
6 that process, I didn't quote from the exhibit, I
7 quoted from the article of the interview that
8 Dr. Farone gave.

9 THE COURT: May I see the article?

10 MR. COFER: Sure, I will show you the
11 quote. It is right here.

12 THE COURT: I'm just asking to see the
13 article.

14 What you have handed me, Mr. Cofer, is
15 the January 31, 1999 article entitled "Safer
16 Smoke, a Researcher's Quest and Industry's Fear
17 and One Possible End to the Tobacco Wars," by
18 John Schwartz, which was the subject of some of
19 your examination on what looks like Page 2 of
20 the text of the article.

21 There is a bold caption called, or titled
22 "Applied Power Concepts." Immediately above
23 that caption is a line and in italics is the
24 following statement, quote: Boy, exclamation
25 point, wouldn't it be wonderful if our company

1 was first to produce a cancer-free cigarette?
2 What we could do to the competition. End of
3 italics.

4 Then there is an attribution of that
5 statement as follows, quote: Mid-1950s memo
6 from PR firm Hill & Knowlton, quoting an unnamed
7 tobacco company research director.

8 And it is true, when you talked to the
9 witness, you were quoting from the article
10 quoting from the mid-1950s memorandum.

11 May I see the memoranda, and then I would
12 like each side to quickly tell me what the
13 proffer was earlier and what the defense
14 objection was and where we left last time we
15 discussed this. Who is going to talk to me on
16 that?

17 MR. GAYLORD: Let me respond to Counsel
18 pointing how he was quoting from the article. I
19 wasn't familiar enough with the article to
20 recognize it from there. I apologize if I had
21 the wrong source he was quoting from.

22 THE COURT: I'm looking at Page 2 of
23 Exhibit 163. The first paragraph reads: The
24 attitude of the men we must directly deal with
25 in the industry is at once interesting and

1 important for us to understand. That is why
2 notes on the four interviews with, quote,
3 research directors, close quotes, are given at
4 some length. We will get from them little real
5 information about lung cancer, pro or con, but
6 you will find some mighty interesting opinions.
7 One of the men said, quote, it's fortunate for
8 us that cigarettes are a habit that they can't
9 break, close quote. Said another, quote: Boy,
10 exclamation point, wouldn't it be wonderful if
11 our -- emphasized with underlining -- our
12 company was first to produce a cancer-free
13 cigarette? What we could do to the competition,
14 exclamation point, end of quote.

15 Said another, quote: Suppose everybody
16 smoked just one less cigarette a day. That
17 would be 40 billion a year, close quote.

18 And again, quotes: The stock market fall
19 is terrible when you remember dividends are
20 going to be much larger next year without the
21 EPT, end of quote.

22 The statement in the middle of that
23 paragraph, Boy, wouldn't it be wonderful if our
24 company was the first to produce a cancer-free
25 cigarette? What we could do to the competition,

1 is word-for-word what appears in the Washington
2 Post magazine article which was quoted by
3 Mr. Cofer.

4 Now, tell me, please, what was the
5 premise on 163, what was the objection,
6 Mr. Randles or Mr. Dumas?

7 MR. RANGLES: Your Honor, there are two
8 primary objections to that document. Neither
9 are authentication. That's the one document
10 that has the stamp on it from the archives.

11 THE COURT: This is a Hill Knowlton
12 archived document.

13 MR. RANGLES: Yes, it has the stamp at
14 the stop.

15 The first objection is hearsay within
16 hearsay. This document purports to quote from a
17 number of people.

18 The second objection is similar to it.
19 It has statements by a number of -- I assume
20 this document is offered by some sort of
21 admission by Philip Morris. The trouble is,
22 this document does not differentiate between
23 what was said by the Philip Morris research
24 director and what was said in separate
25 interviews with research directors at other

1 companies. So it is not an admission and it
2 raises a 403 problem with confusion to the jury
3 and prejudice to Philip Morris by having
4 comments by research directors at other
5 companies attributed to Philip Morris.

6 THE COURT: Is there any contest by the
7 defendant that this Exhibit 163 is the mid-1950s
8 memo from PR firm Hill & Knowlton quoting an
9 unnamed tobacco company research director?

10 MR. RANGLES: No, Your Honor.

11 THE COURT: Mr. Gaylord.

12 MR. GAYLORD: Your Honor, I guess the
13 first layer of hearsay objection is it is an
14 ancient document, given its authenticity. Our
15 best assessment had been that it had been an
16 authenticity problem. We weren't the ones
17 making the arguments and coming up with this
18 before.

19 I think Counsel has put in part of a
20 quote from another double hearsay source, the
21 article, and at least that paragraph needs to be
22 put in for the sake of context. The document
23 itself is not double hearsay. Only some
24 references within it could be claimed to be
25 double hearsay. By and large, what the document

1 is is a memo to the Hill & Knowlton PR team
2 about the task that they are undertaking for the
3 tobacco industry, and it has great relevance. I
4 think the quotes that brought the document up
5 right now are a matter of needing to put it in
6 context.

7 THE COURT: Mr. Randles, can you tell me
8 where we left the record regarding Exhibit 163
9 at the time this exhibit was initially argued?

10 MR. RANGLES: We never got to the
11 specific objections because of this. Because of
12 the authentication, the Court reserved.

13 THE COURT: I actually had a chance to
14 rule on it?

15 MR. RANGLES: That's correct.

16 THE COURT: Mr. Cofer, anything you want
17 to add?

18 MR. COFER: Yes, there is, Your Honor.

19 If Your Honor will recall the testimony,
20 I asked Dr. Farone, "Isn't it in Philip Morris'
21 financial interests to make a safe cigarette?"
22 He said, "No, lawsuits," so on and so forth.

23 I had previously asked him -- in fact,
24 the first question I asked him this morning,
25 "You were the subject of an interview and a

1 profile in Washington Post. Have you read it?
2 I may be referring to it. I way I may want to
3 ask you about it. Tell me if you disagree."
4 This comment then -- he had read the article and
5 later in the article he makes a quote that I
6 quoted to him, or paraphrased, that is very
7 similar to that where he essentially adopts that
8 reasoning.

9 It didn't matter who made the statement.
10 The fact is, someone made the statement back in
11 '54, "Boy, wouldn't it be great." Dr. Farone
12 said January 31, 199, that's right, market
13 share, big advantage.

14 I only used that statement out of that
15 article, the profile of Dr. Farone, to show that
16 Dr. Farone agreed that there would, in fact, be
17 a marketing advantage to a safe cigarette,
18 therefore, Philip Morris did have a bona fide
19 financial interest in producing a safe
20 cigarette.

21 THE COURT: But you did that at some risk
22 and you took a direct quote from an exhibit that
23 your side was trying to keep out, and I think it
24 is fair that the rest of the paragraph from
25 which that statement comes can be introduced to

1 the jury.

2 I think the hearsay within hearsay
3 concern is fair as to the entire exhibit. There
4 are attachments and other matter. But the door
5 was opened as to the full text of the paragraph
6 I have read for the record.

7 You may show the jury Exhibit No. 163.
8 You may identify what it is and you may show
9 that it is, from your perspective, the mid-1950s
10 memo. So you cover the paragraph at the top of
11 Page 2.

12 Now, RJR and Exhibit 88.

13 MR. COFER: On direct examination,
14 Dr. Farone testified that in or around 1980
15 Philip Morris was testing Reynolds products.
16 They found that there was a burst of ammonia gas
17 at the beginning.

18 I didn't ask him about any specific
19 document. My question was directly related to
20 his testimony on direct examination. I didn't
21 go into measuring pH. I didn't go into the
22 Teague (phonetic) memo. I said, "Is the secret
23 to Marlboro ammonia? You told me that you
24 noticed in 1980 that Reynolds was doing that.
25 Did that make a difference in market share?"

1 THE COURT: I understand your position
2 you didn't open the door to the hearsay exhibit.
3 Mr. Gaylord, your position.

4 MR. GAYLORD: There was actually several
5 references in the cross-examination to other
6 manufacturers. One reference was to RJR getting
7 into a fight with B&W, if I remember the right
8 names, over something they were putting in their
9 cigarettes or something they were representing
10 about their cigarettes. Then there was a segue
11 into ammonia, and then there was a discussion
12 about whether or not it was secret that Marlboro
13 used ammonia in its product, and there was
14 reference to reverse engineering of other
15 products.

16 There was a question about Winston having
17 increased ammonia and the witness acknowledging
18 that they were aware that Winston had increased
19 ammonia.

20 THE COURT: But all of that goes to the
21 witness' knowledge about what's going on in the
22 industry at the time. It doesn't necessarily
23 affect the 403 balancing that I did at the
24 beginning of the witness' testimony about the
25 admissibility of Exhibit 88, which is a hearsay

1 chemical analysis about the content of ammonia
2 in a Marlboro cigarette from the perspective of
3 RJR. I don't know how all of that gets into the
4 document.

5 MR. GAYLORD: I will just to try to state
6 it as succinctly as I can, my last try on it is
7 that I think the witness now has knowledge from
8 this document that Winston was increasing its
9 ammonia. In fact, expressly in response to its
10 findings about Marlboro.

11 THE COURT: The witness may testify about
12 anything about which he has personal knowledge.
13 He doesn't get into the exhibit necessarily by
14 doing that. I'm not allowing in 88 and staying
15 with the original ruling that it is not
16 admissible.

17 Your first topic was, now, you need to be
18 able to show why the government didn't test
19 products, because the witness was asked -- it
20 was suggested to the witness that the government
21 could have done the testing that Philip Morris
22 wasn't doing.

23 MR. GAYLORD: Yes.

24 THE COURT: Mr. Cofer.

25 MR. COFER: What happened was the witness

1 said, "We did not do whole product testing."
2 THE COURT: Right.
3 MR. COFER: I was pointing out, well,
4 others could do it.
5 THE COURT: Right.
6 MR. COFER: If we chose not to do it,
7 others could do it.
8 THE COURT: Right.
9 MR. COFER: Like who? Like the federal
10 government? There are many other agencies
11 besides FDA. There is the National Institute of
12 Health. You have the National Cancer Institute.
13 THE COURT: You became a witness there by
14 saying, "like the government." It is fair for
15 them on rebuttal to show limitations to
16 government testing that you suggested to the
17 witness. So I'm going to allow that within
18 reason, and we will see where it leads.
19 MR. COFER: I think it was their motion
20 in limine to keep the FDA out.
21 THE COURT: It doesn't matter whose it
22 was. There was a ruling, and there we are.
23 Now, anything else before we bring in the
24 jury?
25 MR. GAYLORD: No, Your Honor. Thank you.

1 THE COURT: Can you commit to concluding
2 by 5:00?

3 MR. GAYLORD: I sure will give it every
4 try. I'm going to have to go fast.

5 THE COURT: We are going to have to
6 adjourn at 5:00, is what I am warning you. If
7 it is your belief that the witness has to come
8 back, you need to know that going in.

9

10 (Open court; jury
11 present:)

12 .

13 THE COURT: All right. Jurors, we are
14 organized. Ready to go with redirect.

15 Mr. Gaylord.

16 MR. GAYLORD: Thank you, Your Honor.

17

18 REDIRECT EXAMINATION

19

20 BY MR. GAYLORD:

21 Q. Dr. Farone, I have a commitment to
22 finish, so I'm going to go as quickly as I can.
23 It is going to be rough segues from subject to
24 subject.

25 These are notes I have made as we have

1 gone through earlier parts of the day. So out of
2 the blue, I'm going to ask you is there any
3 evidence -- there was a document that was
4 discussed about why people smoke. It is one of
5 those back in the 1950s. One of the items on it
6 was addiction, other items on it had to do with
7 taste and flavor and stuff like that.

8 Question: Is there any evidence that you
9 ever became aware of in your career at
10 Philip Morris that most people liked the taste of
11 cigarettes before they become attached to the drug
12 effect of nicotine?

13 A. No.

14 Q. There was discussion to the effect that
15 everyone knows nicotine is a drug. In fact, you
16 were taught that in your school. Do you recall
17 that?

18 A. Yes.

19 Q. The school that you were talking about
20 was advanced chemistry graduate school work?

21 A. Natural products, senior class.

22 Q. Not the stuff that everybody in the
23 public schools learns?

24 A. Correct.

25 Q. Has Philip Morris and the tobacco

1 industry, to your knowledge, gone to great lengths
2 to avoid having its products treated as a drug?

3 A. Yes.

4 Q. And that includes efforts to avoid
5 anybody calling it a drug so it would get the
6 attention of any regulatory agencies?

7 A. That's correct.

8 Q. The Accord cigarette was the subject of
9 discussion. Let's take a look at that package, if
10 you would.

11 Does Philip Morris disclose anything on
12 that about how that differs from any of its other
13 cigarettes?

14 A. It says "ultra low tar when smoked in the
15 Accord lighter."

16 Q. Does it disclose anywhere on that package
17 or with respect to that product that its other
18 cigarettes have a cancer potential in them?

19 A. No. It does have the Surgeon General's
20 warning on the side.

21 Q. Does it disclose -- does Philip Morris
22 disclose with respect to that Accord that it
23 satisfies the addiction that smokers may have to
24 nicotine with some different health effects
25 associated with that, like reduced cancer risks?

1 A. No, it doesn't.

2 Q. By the way, that product we have seen has
3 certain things that are required to be used with
4 it?

5 A. Yes. The lighter.

6 Q. You talked about a project underway
7 during your career at Philip Morris that would
8 have required a special filter to be used.

9 A. Yes, a special filter to be sold with
10 every pack of 20 to reduce carbon monoxide.

11 Q. The reason why that project was killed
12 was because it doesn't have the special filter
13 built in, and you had to have an external thing to
14 use with the cigarette?

15 A. That's correct.

16 MR. COFER: Objection, leading.

17 THE COURT: It is leading. It is also
18 late. He is going to try not to lead, but let
19 me know if it really bothers you.

20 Go ahead.

21 MR. GAYLORD: I will try, Your Honor.

22 BY MR. GAYLORD:

23 Q. Mr. Cofer made a statement about
24 nitrosamines causing lung cancer in humans this
25 morning. Do you recall that?

1 A. Yes, he did.

2 Q. To your knowledge, is that the first time
3 that any agent of Philip Morris has ever made that
4 admission?

5 MR. COFER: Objection to that.

6 THE COURT: The basis?

7 MR. COFER: The objection is that
8 misstates what I said. Second, it is
9 argumentative. Third --

10 THE COURT: Go ahead.

11 MR. COFER: Third, the legal significance
12 is beyond this witness.

13 THE COURT: Objection is overruled. Go
14 ahead.

15 THE WITNESS: That's the first time I
16 have ever heard that in a public forum.

17 BY MR. GAYLORD:

18 Q. To your knowledge, does Philip Morris
19 spend a great deal of money avoiding that
20 admission?

21 A. Yes.

22 Q. You wrote some words and some
23 descriptions of projects that were killed by
24 Philip Morris. I just wanted to ask you, were
25 there more that you didn't finish putting on that

1 list?

2 A. Yes.

3 Q. There was discussion about reference
4 cigarettes and testing on reference cigarettes, so
5 forth?

6 A. Yes, there was.

7 Q. Would it be fair to say that
8 Philip Morris used reference cigarettes and did
9 testing, animal testing, on those cigarettes?

10 A. Yes.

11 Q. As though that was a finished, complete
12 cigarette?

13 A. Yes.

14 Q. So there was a noncommercial cigarette
15 that they tested?

16 A. That's correct.

17 Q. And then there was the commercial
18 cigarette, like Marlboro, that they didn't test?

19 A. That's correct.

20 Q. In fact, over the years did Philip Morris
21 and the rest of the tobacco industry perform what
22 might be considered epidemiological testing on
23 human subjects?

24 MR. COFER: Objection, argumentative.

25 THE WITNESS: By the fact that cigarettes

1 are put out there, that stay on the market for
2 more than some period of time, you are obviously
3 doing epidemiological studies on humans.

4 BY MR. GAYLORD:

5 Q. Philip Morris didn't do those studies;
6 others did?

7 A. The actual studies are done by the public
8 health community, but yes.

9 Q. And a great deal of epidemiological study
10 has been done on the question of cigarette smoke
11 causing cancer and other diseases?

12 A. Correct.

13 Q. But that was done on human subjects that
14 were already customers, consuming the product and
15 using it for years?

16 A. Yes.

17 Q. To your knowledge, did Philip Morris ever
18 do anything at all to disclose to its customers
19 that they were performing the role of test
20 subjects for the epidemiological study of lung
21 cancer in humans?

22 MR. COFER: Objection, argumentative,
23 leading.

24 THE COURT: Sustained.

25 MR. GAYLORD: I will move on, Your Honor.

1 BY MR. GAYLORD:

2 Q. Mr. Cofer made the statement -- or the
3 question, I guess, to you in discussing testing or
4 absence of testing by Philip Morris, couldn't the
5 federal government test it. Do you recall that?

6 A. I do.

7 Q. Does the federal government, to your
8 knowledge, test consumer products for
9 manufacturers?

10 A. Generally not. They generally require
11 the manufacturers to test them, and then they
12 audit or check on the manufacturer's testing.

13 Q. When the question is, does a product that
14 has drug effects and potential risks to human
15 consumers, does that product meet proper safety
16 standards for use by humans, when that question
17 arises, what does the appropriate federal agency
18 expect of manufacturers?

19 A. Normally, they expect the manufacturer to
20 provide the information that they can check.

21 Q. And then the agency, like the Food & Drug
22 Administration, for example, scrutinizes the test
23 results to test procedures to determine whether
24 the adequate testing has been done in the past?

25 A. That's correct.

1 Q. Did that ever occur for Philip Morris
2 cigarettes?

3 A. No.

4 Q. Would a reasonable manufacturer of a safe
5 product put the product on the market without
6 testing and wait to see if the government stopped
7 it?

8 A. No.

9 Q. You talked about the project where a
10 carbon monoxide filter was developed and
11 successful. Do you recall that?

12 A. That the project was successful.

13 Q. The project was successful. I don't mean
14 it was put into use, but it was a successful
15 project of develop an effective filter for carbon
16 monoxide?

17 A. Yes.

18 Q. And that's another example where an
19 external thing to the cigarette would have been
20 necessary. I guess that is the example that --
21 where an external thing to a cigarette was said
22 what killed the project?

23 A. Yes.

24 Q. In order to have marketed that
25 improvement, would Philip Morris had to have at

1 least tacitly, if not expressly, admit that there
2 was a poisonous gas in the smoke?

3 A. They would have to discuss or somehow
4 explain the utility, I guess, of that device.

5 Q. And the utility of that device would have
6 been in relationship to the fact that without it
7 there is a poisonous gas in the smoke?

8 A. Well, there is probably even a little
9 with it, a tiny bit. The objective would be to
10 remove, say, 99 percent of the carbon monoxide.

11 MR. GAYLORD: Excuse me a moment, Your
12 Honor.

13 THE COURT: Sure.

14 BY MR. GAYLORD:

15 Q. I will move on and come back to a subject
16 that I had a note about here.

17 You made some statements, Dr. Farone,
18 about the attitude of the company with respect to
19 Marlboro in particular as a cigarette.

20 A. Yes.

21 Q. Was Marlboro viewed at Philip Morris as
22 sort a special part of the product line?

23 A. It is their sort of let's call flagship
24 product. That's the one that has the largest
25 share compared to any other product.

1 Q. Was it understood when you were there
2 that Marlboro was sort of a franchise product, so
3 to speak?

4 A. Yes.

5 Q. And Marlboro was the product that brought
6 Philip Morris from fourth or fifth place to number
7 one in the world?

8 A. That's correct.

9 Q. Was there an attitude that you found with
10 respect to possibly changes, improvements,
11 modifications or disclosures about Marlboro that
12 there was resistance to doing any of those things
13 because Marlboro was so important and so
14 successful?

15 A. That is correct. No one wanted to make
16 any changes to that product unless they absolutely
17 had to. They did make changes over the years, but
18 they were minor changes compared to launching a
19 new product like Accord or Merit. It was always
20 given a different name, called a different brand.

21 Q. You told us that Philip Morris never
22 really studied brand relationships. That is to
23 say, they never compared health problems
24 associated with one brand or another, theirs or
25 others?

1 A. That's correct.

2 Q. And, of course, they never came forward
3 with information suggesting that there were health
4 differences between one cigarette of theirs to
5 another cigarette of theirs?

6 A. Other than those implicit in, say, a low
7 tar claim, yes.

8 Q. Or year-to-year to suggest that a filter
9 made a difference?

10 A. That's correct.

11 Q. You were asked a number of questions
12 about whether Philip Morris has a financial
13 interest in making a safe cigarette.

14 A. That's correct.

15 Q. First off, you were also asked to talk
16 about the subject of, quote/unquote, safe
17 cigarette. I want to make sure the thrust of your
18 testimony throughout your testimony about what
19 could have and you said should have been done to
20 improve the cigarettes was not that they should
21 make the ultimate safe cigarette, was it?

22 A. No, that's correct.

23 Q. It was that there were many ways to make
24 the cigarette more safe?

25 A. Safer, yes.

1 Q. And do you have an opinion that the
2 ability to virtually eliminate tobacco-specific
3 nitrosamines, first off, that that was present
4 technology available when you were at
5 Philip Morris?

6 A. Well, it could have been done then but,
7 in fact, it was done with the Next cigarette. We
8 talked about the Accord. It had 91 percent
9 reduction in tobacco-specific nitrosamines. The
10 Next cigarette had virtually zero tobacco-specific
11 nitrosamines. In that sense, as far as
12 tobacco-specific nitrosamines go, this is a step
13 backwards, not forward.

14 Q. You said "Next." Let's make it clear
15 that's a brand name. You don't mean the next one
16 they came out --

17 A. The Next one is the denicotinized
18 cigarette.

19 Q. That came out in the late '80s?

20 A. Early '90s, I think.

21 Q. Do you have an opinion whether
22 eliminating the tobacco-specific nitrosamines was
23 made for a substantially safer cigarette,
24 vis-a-vis lung cancer?

25 A. That's the conclusions of the people in

1 the health community. That's the conclusions that
2 we operated under. I put that at the top of my
3 list, as you recall, of compounds we should take
4 out of smoke.

5 Q. We talked about the Accord with this
6 question in mind. Was there any way you know how
7 a potential buyer of the Next cigarette could have
8 ever known that the Next cigarette was much safer
9 against lung cancer than their Marlboro?

10 A. No, not as far as I know.

11 Q. And Philip Morris didn't engage in a main
12 ad campaign or spend promotional money to say to
13 people, "Here is a cigarette that won't cause you
14 lung cancer"?

15 MR. COFER: Objection, Your Honor,
16 preemption.

17 THE COURT: I'm overruling that
18 objection, but this is argumentative and
19 something that can be summarized on closing.

20 BY MR. GAYLORD:

21 Q. How much money, Dr. Farone, are you aware
22 of that Philip Morris -- money and resources that
23 Philip Morris put into to disclosing to the
24 potential customers of Next that it was a safer
25 cigarette than a Marlboro because of reduced risk

1 of lung cancer?

2 A. The \$300 million, as far as I know, we
3 talked about earlier, was not related to that kind
4 of advertising or any of that kind of information.

5 Q. And, to your knowledge, has Philip Morris
6 ever, to this day, acknowledged that there is a
7 risk of lung cancer associated with Marlboro
8 against which they can compare some other product?

9 A. The way it is usually done -- there are
10 some comparisons of biological results with
11 Accord. It is usually done against some unnamed
12 other cigarette.

13 Q. And the question that you were asked
14 about whether Philip Morris has a financial
15 interest in making a safe cigarette, let me ask
16 you this: While you were at Philip Morris, did
17 you develop an understanding that there was a
18 pervasive concern about the outcome of potential
19 litigation that influenced what science was
20 allowed to be done and influenced attitudes and
21 policies towards a safer cigarette?

22 MR. COFER: Objection, leading,
23 argumentative.

24 THE COURT: Rephrase your question.

25

1 BY MR. GAYLORD:

2 Q. Did the possible consequences in the
3 litigation situation affect what you and your
4 people were able to do scientifically?

5 A. Yes.

6 Q. And did it affect, as you could tell, the
7 policies of the company with respect to pursuing
8 safer cigarettes?

9 A. Yes.

10 Q. Is the question about financial interest
11 in making a safe cigarette answerable before we
12 know the outcome of litigation against the company
13 today?

14 MR. COFER: Objection. Argumentative.

15 THE COURT: Overruled. Go ahead.

16 THE WITNESS: The company could have made
17 safer cigarettes all the way along.

18 BY MR. GAYLORD:

19 Q. Now, Mr. Cofer made the statement this
20 afternoon, is it misleading to tell part of the
21 story and not to tell it all. With that preface,
22 I want to ask you about a quote that was made from
23 an article involving you in the Washington Post.
24 The quote was, "Boy, wouldn't it be wonderful if
25 we were the first cigarette company to admit" --

1 I'm sorry.

2 THE COURT: Mr. Cofer, here is the copy
3 that you handed me.

4 MR. COFER: Thank you, Your Honor.

5 BY MR. GAYLORD:

6 Q. -- "produce a cancer-free cigarette?"

7 The quote was, "Boy, wouldn't it be
8 wonderful if our company was the first to produce
9 a cancer-free cigarette? What we would do to
10 competition." That's what we were told from the
11 mid-1950s in a Hill & Knowlton document.

12 Do you remember that quote?

13 A. Yes.

14 MR. COFER: Your Honor, may we approach?

15 THE COURT: Yes.

16 (Discussion at the bench
17 off the record.)

18 THE COURT: Ask the question to be sure
19 that the quote is properly attributed.

20 MR. GAYLORD: Before I put that the
21 quote -- that paragraph, that quote is from the
22 Hill & Knowlton document. In fairness to
23 Counsel, the quote this morning was from the
24 article from the Washington Post, which refers
25 to the Hill & Knowlton document.

1 MR. COFER: Thank you, Counsel.

2 BY MR. GAYLORD:

3 Q. I'm going to talk about some of these
4 sentences surrounding and in context with the one
5 in question.

6 Now, Mr. Farone, you are familiar with
7 this document, generally?

8 A. Generally, yes.

9 Q. And just for context, it is from a
10 document involving discussions about PR campaign
11 preparations for the industry by Hill & Knowlton,
12 and the rest of the paragraph from which that
13 statement came reads: The attitude of the men we
14 must directly deal with in the industry is at once
15 interesting and important for us to understand.
16 That is why notes on the four interviews with
17 research directors are given at some length."

18 Do you know what that refers to,
19 "research directors"?

20 A. Research directors at the various
21 cigarette companies.

22 Q. Okay. "You will get from them little
23 real information about lung cancer, pro or con,
24 but you will find some mighty interesting
25 opinions. One of the men said, quote, It is

1 fortunate for us that cigarettes are a habit they
2 can't break, close quote.

3 Said another, Boy, wouldn't it be
4 wonderful if our company was first to produce a
5 cancer-free cigarette? What we could do to
6 competition.

7 Said another, suppose everybody smoked
8 just one cigarette less a day. That would be
9 maybe 40 billion a year.

10 And, again, the stock market fall is
11 terrible when you remember dividends are going to
12 be much larger next year without the EPT."

13 Do you know what "EPT" is?

14 A. No.

15 Q. Thank you.

16 Prior to the 1964 Surgeon General's
17 Report, did Philip Morris in its documents use
18 words like "cancer," "carcinogen" and "nicotine
19 addiction"?

20 A. We saw some that used those words, yes.

21 Q. Did that change after the Surgeon
22 General's Report in 1964?

23 A. Yes.

24 Q. The use of those terms that were obvious
25 and clear?

1 A. Well, I think it changed over time. It
2 is not just like a curtain falls down, but the
3 further you go, the more sensitive people are
4 about using certain words.

5 Q. Anybody at Philip Morris, while were you
6 there, ever say anything, "Boy, wouldn't it be
7 wonderful if we were the first cigarette company
8 to admit that our cigarettes caused cancer?"

9 A. No.

10 Q. Or "to admit our cigarettes are
11 addictive"?

12 A. No.

13 Q. You talked about -- I'm not going to take
14 the trouble.

15 There was a list put on the easel of
16 items that were reduced, or efforts were made to
17 reduce them at Philip Morris in the contents of
18 the cigarette. Do you recall that?

19 A. Correct.

20 Q. Several of those were items of effort to
21 reduce the total tar and nicotine all at once; is
22 that right?

23 A. Correct.

24 Q. For example, the filter, the idea that
25 you put a filter on a cigarette is an

1 indiscriminate filter and takes out whatever
2 droplets of material there are in the smoke?

3 A. Depends on how you do it. There is some
4 selectivity, but basically it reduces everything,
5 tar and nicotine.

6 Q. And when you dilute the smoke by changing
7 the porosity of the paper so more air comes
8 through it, is that what that is for, by the way?

9 A. That's one thing. Air coming into it and
10 things like carbon monoxide and other gases
11 leaving the cigarette.

12 Q. Or when you change the makeup of the
13 smoke by filter ventilation?

14 A. That's correct.

15 Q. The holes?

16 A. The holes in the tip.

17 Q. Those are the efforts that change the
18 mix, because they either cut out some of the
19 droplets in the smoke or they add more air per
20 droplet, so to speak?

21 A. That's correct.

22 Q. In those efforts, isn't it true that what
23 was found was that if you do that enough to reduce
24 the nicotine below what the smoker needs for their
25 habit, their dependence, they compensate?

1 A. That's true.

2 Q. And the jury has heard a lot about
3 compensation. I won't go through it again.
4 That's the idea that they smoke differently, once
5 they are addicted to the nicotine, to get what
6 they need?

7 A. That's right.

8 Q. That was known at Philip Morris?

9 A. Yes.

10 Q. There was a discussion with you about
11 what's the way of science with respect to a
12 hypothesis, a hypothesis of risk associated with a
13 product, I guess. You indicated that the
14 hypothesis has to be refuted.

15 A. Yes. You can only overturn hypotheses to
16 disprove them. You can't prove a hypothesis.

17 Q. With respect to -- what I'm going to ask
18 you, does that translate into relevance to what a
19 reasonable and responsible manufacturer does with
20 respect to their products? Does a reasonable and
21 responsible manufacturer wait for proof that its
22 product is causing harm, or does it accept the
23 hypothesis as true until it can disprove the harm
24 is being caused?

25 A. There is an analogy there that the

1 general application, general rule, is that you go
2 look for all ways that your product might cause
3 harm and you try to disprove those hypotheses by
4 showing that's not a viable mechanism or that
5 doesn't work that way.

6 Q. Is that what Philip Morris did?

7 A. No.

8 Q. Did Philip Morris instead challenge and
9 resist and oppose and deny the hypothesis that
10 smoking Marlboros causes lung cancer?

11 A. Outside the company. Inside the company,
12 no.

13 Q. If I waited long enough, I would
14 remember.

15 You were asked a number of questions,
16 Dr. Farone, about carcinogens and even
17 anti-carcinogens. Do you remember that?

18 A. Yes.

19 Q. I'm going to show you a part of
20 Plaintiff's Exhibit 42. I just need some
21 orientation before I show you more.

22 Show me which parts of this are promoters
23 or causers of cancer and which part is to the
24 contrary.

25 A. These are either cancer-causing agents or

1 promoters, and this is the anti-carcinogens.

2 Q. Okay. I'm just going to show the jury
3 quickly another bad copy, I'm sorry. Let me
4 orient myself and the jury as to what this is.

5 This is Plaintiff's Exhibit 42. It is a
6 Philip Morris Incorporated document called
7 "Tobacco and Health, R&D Approach," November 15,
8 1961, by Dr. H. Wakeham. I think we have seen
9 some parts of it before, not these parts.

10 This page that I have on the viewer, if
11 you can see it at all from where you are,
12 Doctor -- I would have you come down, but I don't
13 want to spend too much time with it. I'm not
14 going to have you read all this list. It says,
15 "Partial list of compounds in cigarette smoke also
16 identified as carcinogens." This is Dr. Wakeham's
17 assessment of that question in 1961?

18 A. That's correct.

19 Q. Is this consistent with the knowledge
20 that you had as a scientist at Philip Morris?

21 A. Well, that's a partial list. Yeah, there
22 is more than that.

23 Q. Okay. But at least this number of things
24 was identified in 1961 --

25 A. That's correct.

- 1 Q. -- by Philip Morris?
2 Then the second page of it says,
3 "Cancer-promoting agents in cigarette smoke." I'm
4 not going to read the text right now, but to show
5 that there is a list and a lot of categories of
6 materials, it says, "Some promoting agents." I
7 don't read these to be identified chemicals.
8 These look like categories more.
- 9 A. Classes.
- 10 Q. Phenols, liquid paraffin, hydrocarbons,
11 so on, so forth.
- 12 The next page is a list of phenols in
13 cigarette smoke. This is a breakdown of the first
14 page.
- 15 A. That's correct.
- 16 Q. And it even has some measurements. I
17 take those to be measurements on the right-hand
18 column, UG per Cigt.
- 19 A. Micrograms.
- 20 Q. It's not "U," it's --
- 21 A. Micrograms per cigarette.
- 22 Q. So to some extent, Philip Morris knew
23 even how much of these things was in cigarettes --
- 24 A. In cigarette smoke, yes.
- 25 Q. -- that were cancer causing?

1 And then we heard the term
2 "anti-carcinogen" in this last page.

3 A. That's correct.

4 Q. Anti-carcinogen, does that mean that
5 these were in any sense put there to prevent
6 cancer?

7 A. No. It means that there are some
8 compounds that when you test them have the
9 opposite of causing cancer. They will, in fact,
10 protect cells by some of the mechanisms by which
11 cancer can happen or mutagenesis can happen.

12 Q. You are referring to the testing of the
13 ingredients individually?

14 A. Yes.

15 Q. Philip Morris never put all these things
16 together into the stew and tested it to see if the
17 total smoke of the cigarette caused cancer?

18 MR. COFER: Objection, leading.

19 THE COURT: It is cumulative,

20 Mr. Gaylord.

21 MR. GAYLORD: All right. Thank you.

22 BY MR. GAYLORD:

23 Q. In view of the document that we were just
24 looking at, written by Dr. Wakeham, do you have an
25 opinion it was reasonable conduct by a scientist

1 in Dr. Wakeham's position to deny in 1976 that
2 there was evidence that smoke contains -- causes
3 lung cancer?

4 A. It is not a reasonable scientific
5 position.

6 Q. Or Vice President Bowling in 1976 to deny
7 that anything had been identified as an ingredient
8 in cigarette smoke that caused cancer?

9 A. Again, that's not a reasonable scientific
10 position.

11 Q. Dr. DeNoble was the subject of some
12 discussions and he wrote some things and used a
13 word "reinforcing agent," rather than "addiction"
14 for nicotine. Do you recall that discussion?

15 A. Yes.

16 Q. Do you recall that Dr. DeNoble, in fact,
17 in talking about that subject, has indicated he
18 means by "reinforcing agent" one which would
19 maintain the brain receptor qualities of nicotine?

20 A. Yes.

21 Q. And you knew Dr. DeNoble pretty well when
22 he was there?

23 A. He didn't work for me, but we had -- we
24 would meet for coffee and talk things over quite
25 often.

1 Q. Do you have reason to believe that he
2 understood that nicotine was a chemical-dependence
3 causing substance?

4 A. Well, you know, I went to all the
5 presentations he made. I read the reports. I
6 discussed it with him and his colleagues, and,
7 again, he had an understanding of the effects of
8 nicotine.

9 Q. Would it have made any sense for
10 Dr. DeNoble to be studying the nicotine analogs
11 for reasons that he and Dr. Seeman were doing it
12 if they didn't believe that the nicotine was the
13 habit-forming substance in cigarette smoke?

14 A. It's the main pharmacological ingredient,
15 and that's why they were studying the analogs.

16 Q. The point of the analogs was to get
17 something that would cut down on the effects on
18 the heart, that nicotine was not the cause, while
19 still supplying the drug effect, the hit to the
20 smoker?

21 A. The pleasurable sensation, yes.

22 Q. And Dr. Osdene was one of the authors or
23 signatories of one of the documents that
24 supposedly denied nicotine was addictive?

25 A. Yes.

1 Q. He is the author of our Exhibit 109, in
2 which he says that "The thing we sell most is
3 nicotine"?

4 A. That's correct.

5 Q. And Dr. Dunn was one of the signators of
6 that, one of those documents?

7 A. Yes.

8 Q. And he is the author of one of the
9 statements in our Exhibit 98, I think it is, in
10 which he says, they were going to do tests,
11 referring to Dr. Levy, Carolyn Levy, quote, I have
12 given Carolyn approval to proceed with this study.
13 If she's able to demonstrate as she anticipates no
14 withdrawal of nicotine, we will want to pursue
15 this avenue with some vigor. If, however, the
16 results with nicotine are similar to those gotten
17 with morphine and caffeine, we will want to bury
18 it. Accordingly, there is two copies of this
19 memo, the one attached and the one I have.

20 Do you have reason to believe that
21 Dr. Dunn, the nicotine kid, was a person capable
22 of withholding the whole truth in his work at
23 Philip Morris about nicotine?

24 A. Yes.

25 Q. You were asked some questions about

1 safer cigarettes, and with respect to the Next, I
2 believe it was -- I'm trying to make sense of my
3 notes. Excuse me.

4 I think I heard you say it was the safest
5 cigarette ever marketed.

6 A. In terms of tobacco-specific
7 nitrosamines, which is number one on my list, it
8 didn't have any.

9 Q. That's one of the most -- one of the
10 first and foremost things that you described as a
11 program that would have been useful during your
12 time there but didn't have it?

13 A. Correct.

14 Q. And then you said nobody knew it was
15 safe. What is that a reference to?

16 A. Well, for Accord and Premiere, and for
17 Eclipse, the trend now is to publish something of
18 the biological information, some of the contents
19 information, list of carcinogens, see how much
20 less it is. And if, in fact, that had been
21 carried through for the Next, it might have been
22 very interesting to see what the reception to that
23 product might have been.

24 Q. Is that -- is part of that what the
25 reception might have been to that product if it

1 had been marketed as a safer cigarette?

2 A. Well, if the data had been made
3 available. I don't know -- marketing is safer, so
4 we have to be careful how that is done, but the
5 point is, it could have been done the same way
6 Accord and Premiere and Eclipse are being done.

7 Q. And you also were asked about the
8 \$300 million. That is the figure we hear about
9 how much was spent to develop the Next.

10 A. Correct.

11 Q. And you said that's not very much money.

12 A. I did.

13 Q. What did you mean?

14 A. Well, Philip Morris, at the time I was
15 there, produced one billion cigarettes a day.
16 Let's round it off to 300 days of production to
17 make it simple. For the sake of argument, raise
18 the cost like they did recently 20 cents a pack.
19 Okay. That's 300 billion pennies. That's
20 \$300 billion, which \$300 billion is 10 percent.

21 Although it sounds like a lot of money,
22 you could pay for a major program like the Next
23 cigarette by simply increasing the cost of your
24 next pack of cigarette by two pennies. That is,
25 if you didn't want to take it out of the profits

1 you already have. If you want to pass that entire
2 cost on to the consumer, it's as little as two
3 cents a pack. It is less, I have been very
4 generous in leaning the other way, will pay for
5 \$300 million a year.

6 In terms of the cost of the product, a
7 dollar a pack or much more, that's a very small
8 percentage to pay for a safer product.

9 Q. Once again, Mr. Cofer made the statement
10 is it misleading to tell part of the story and not
11 all of it. I want to ask you some questions about
12 the documents.

13 We were told there were 850,000 documents
14 in a warehouse in Minnesota and documents all over
15 the internet. Are you familiar with some of the
16 history of some of those documents?

17 A. Yes, I am.

18 Q. Do you happen to know if those documents
19 were released to plaintiffs in lawsuits and their
20 lawyers voluntarily by Philip Morris or after
21 years of litigation and contests in courts?

22 A. My understanding is that they were
23 released under the direction or agreement with the
24 Court.

25 Q. Do you have an opinion whether the Accord

1 cigarette, wherever it went, could have been
2 developed and marketed before all the recent
3 litigation if the defendant, Philip Morris, had
4 chosen to do that?

5 A. Well, as was indicated, there are some
6 new features of things that were developed
7 specifically for Accord, but Premiere,
8 Eclipse-type cigarettes like this, maybe not
9 exactly like this, could have been. And, of
10 course, Next was. So the answer, in terms of
11 general statement, is yes.

12 Q. Do you know about this -- I don't know if
13 you knew this or not, but I will ask you, are you
14 familiar with a sketch design, sketch by
15 Dr. DeNoble before he left of a cigarette that
16 would have had essentially the same
17 characteristics with the Accord?

18 A. Yes, I'm familiar with not only
19 Dr. DeNoble -- as I said, similar things go back
20 to the early '70s.

21 Q. Do you know whether Philip Morris intends
22 to market the Accord along with disclosures that
23 it is substantially better with respect to the
24 lung cancer issue than Marlboro and other
25 cigarettes?

1 A. No, I don't.

2 Q. Do you know whether Philip Morris intends
3 to market the Accord with the disclosure that it
4 will satisfy nicotine addictions while providing
5 lower risk of lung cancer?

6 A. No, I don't.

7 MR. GAYLORD: Thank you.

8 THE COURT: Thank you, Dr. Farone. You
9 may step down.

10 Jurors, the parties and the Court very
11 much appreciate your work this week. It is a
12 lot of effort and you have all been extremely
13 attentive. I want to thank you for that work
14 and ask you to enjoy your weekend and not worry
15 about us until Monday morning at 9:30, when you
16 should be in the jury room.

17 Leave your notes here. Remember not to
18 discuss the case. Have a good weekend.
19 Everybody come back Monday.

20

21 (Open court; jury not
22 present.)

23

24 THE COURT: If you, Counsel, will be here
25 at 9:30, 9:15, as I said, I have got a

1 nine o'clock conference, but I'm going to hope
2 to push through it so we can start with you at
3 9:30 and see where we are. And hopefully you
4 can confer between now and then about your
5 respective schedules so you can figure out a
6 time when I can resolve additional issues you
7 are bringing to me outside the jury's presence.
8 I am unable to do that during the noon hours on
9 Monday or Tuesday, because I have obligations,
10 meetings I have to chair and things I can't
11 miss. We will need to figure out when during
12 the day relative to your needs I can address
13 those things.

14 Let me just make one observation, and it
15 is only so that you're aware that if I'm
16 observing it, the jury may as well. We have all
17 been together now for two weeks, and as days
18 roll on, people get more and more comfortable
19 and more likely to make expressions at counsel
20 table. Engage in conversations, facial
21 expressions, smiling, raised eyebrows, it is
22 happening on both sides of the room, and I'm not
23 saying anything other than to bring it to your
24 attention, because if I see it, the jury sees
25 it. They may find it fine, they may find it not

1 fine. I just alert you that. As we all get
2 more and more tired and more and more
3 comfortable with each other, all those normal
4 guards that you would have up go down. And as
5 they get fatigued, they begin to watch you and
6 when they see you laughing or exchanging
7 expressions or notes. It is happening on both
8 sides of the room. They are seeing it.

9 I'm bringing it to your attention so that
10 you can think about it, along with all the
11 thousands of other things you are trying to keep
12 on hand.

13 Anything for the record for plaintiff?

14 MR. GAYLORD: No, Your Honor.

15 THE COURT: Defense?

16 MR. COFER: Nothing, Your Honor.

17 THE COURT: Good evening, everyone.

18 (Evening recess)
19
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